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CARL PETER THUNBERG.
AN EARLY INVESTIGATOR OF CAPE BOTANY

Part IV.*

(With Plates IV - VII.)

By MIA C. KARSTEN.

HERBARIUM THUNBERGIANUM.

In the Institute of Systematic Botany (the former Botanical Institute) of the University of Uppsala,—that old town with its many reminiscences of the great CAROLUS LINNAEUS, the father of the vegetable system, such as “Hammarby”, the country-seat which once belonged to this gifted botanist, but later on passed into public property; with its magnificent Cathedral (Domkyrkan) in which among other famous people of Sweden’s past LINNAEUS is buried; with its world-famed University founded as early as 1477, and Royal University Library (Kungl. Universitetets Bibliotek) with its marvellous collections of books, manuscripts and incunabula, of which the Silver Bible or Codex Argenteus is of particular interest; with its imposing Castle on a high and commanding position (the town is crossed by a glacial ridge) and its small canalized river, the Fyrisan, with an old water-mill in the near vicinity of the Cathedral,—the THUNBERG Herbarium is housed.

The quaint old building in neo-classic style of the Institute erected in the middle of the small botanical garden (Universitets Trädgård or Hortus Botanicus Universitatis Upsaliensis), is bounded on one side by

* Parts I, II and III of this series were published in the Journal of South African Botany vol. V (1939) pp. 1, 87 and 105 respectively.

the Thunberg Vägen, a road which is easily reached when passing along the square and stately building of the Kungl. Universitetets Bibliotek.

At the time of our visit in the summer of 1937 we found under one roof as much as a lecture-room, a laboratory for the students, the botanical museum where the THUNBERG Herbarium is kept, and several smaller rooms. Since no other door than that of the lecture-room opened to the museum, students could not have access to it when the professor was lecturing! The interior of the building is characterized by its many flights of stairs; the lecture-room, museum (herbarium) and laboratory were all upstairs. However, the use of the old historic building has been restricted since to the systematic department and museum, a new laboratory building, housing the Institute of Physiological Botany (Director Prof. E. MELIN) having been erected.

The THUNBERG Herbarium has a history of its own, and some interesting records are found inter alia in JUEL's "*Plantae Thunbergianae*" (1918), pp. 19-20, a work that is quite indispensable for anyone who wants to examine and study this collection.

The herbarium was originally presented by THUNBERG to Uppsala University in 1785, in order to fill the void caused by a deplorable act of the widow of the great LINNAEUS who sold the unique and priceless herbarium of her late husband to the English botanist Sir JAMES EDWARD SMITH. MACOWAN¹⁹⁷) narrates that in vain the Swedish Government sent a swift corvette to overtake the vessel bound for England in which it had been consigned, charged to capture the treasure at all risks. But unfortunately it was lost to Sweden, so THUNBERG offered his own very rich herbarium which, according to his own statements, contained 15,050 species, including 23,510 specimens. During his life many more specimens were added to the original collection, and to this day the Herbarium Thunbergianum has been kept in the same state as THUNBERG left it.

The history of the old building of the Institute of Systematic Botany is closely linked up with that of the THUNBERG Herbarium. King GUSTAV III who had been rather vexed about the Linnean herbarium having so secretly left the country, was so utterly pleased with THUNBERG having made the Royal University of Uppsala a present of his collections of

¹⁹⁷ PETER MACOWAN, "Personalities of Botanical Collectors at the Cape," Transactions of the South African Philosophical Society, Vol. IV, 1887 (originally read before the Society as his presidential address, July, 1886).

Re-published and compiled by J. H. VERDUYN DEN BOER, Dip. Libr. Amsterdam, under the title: *Botanists at the Cape I, Biographical Notices of Cape Botanists*. With 21 portraits.—A souvenir for the Botanic Section of the Combined Meeting of the British Association and the S. African Association for the Advancement of Science, held at Capetown, July, 1929.

naturalia (in addition to his herbarium, no less than 25,000 insects!) that he erected at his own expense the large institution building in neo-classic style which up to this day contains the botanical museum combined with a conservatory. Although it was built in the years of war 1789 and 1790, it was not until 1807—at the centenary of LINNAEUS' birth—that the building could be inaugurated, which took place with much ceremonial and an opening address by Prof. THUNBERG. The building was on the grounds of the former garden of Uppsala Castle, which at THUNBERG's instigation was given up by the King to the University for a new botanical garden in 1784. The site of the old Linnean garden at Svartbäcken (Uppsala) in a low-lying tract of the town was exposed to constant floods in the spring, and was therefore unsuitable for the purpose¹⁹⁸).

After this historical introduction we may pass on to the herbarium itself.

Apart from many specimens collected in Sweden, especially in the Uppsala Botanic Garden (plant collecting in botanic gardens—though we may recall that ABR. BACK¹⁹⁹) made some collections in the botanic garden in Paris—sounds rather strange to the botanist of to-day!), this most important and extremely valuable herbarium includes hundreds of specimens THUNBERG collected himself at the Cape and on his journeys in the Far East.

However, the THUNBERG Herbarium does not exclusively comprise THUNBERG specimens, but also a number of plants sent to him by other botanists and collectors, and as JUEL informs us, the most numerous contributions originate from OLOF SWARTZ (Jamaica) and ROBERT BROWN (Nova Hollandia). The following are also represented by a fair number of specimens: DAHLBERG (Surinam), FREYREISS (Brasil), FRANCIS MASSON (*Cape*, Teneriffa), ANDERS SPARRMAN (*Cape*), W. ROXBURGH and J. P. ROTTLE (India), G. FORSTER (New Zealand and Terra del Fuego),

¹⁹⁸ These records have been taken from various THUNBERG biographies, viz.:

C. A. AGARDE, "Biographie öfver Carl Petter Thunberg," in Kongl. Svenska Vetenskaps Acad:s Handlingar för år 1828—Stockholm, 1829. (Transact. of the Royal Swedish Academy of Science).—German translation by Dr. GOTTLIEB MOHNKE: "Die Schwedischen Naturforscher Karl Peter Thunberg und Johann Wilhelm Dalman," Stralsund, 1831. For further particulars about this biography and C. A. AGARDE see footnote 221.

NILS SVEDELIUS, "Carl Peter Thunberg 1773-1828. Ett tvåhundraårsminne," in Svenska Linné-Sällskapets Årsskrift, Årgång XXVII, 1944.

Ibid., Abstract of it in English (C. P. Thunberg on his Bicentenary) in the American journal *Isis*, Vol. XXXV, Part 2, No. 100, Spring, 1944, pp. 128-134.

ARVID H. UGGLA, "Carl Peter Thunberg," in *Natio Smolandica VIII* (1945), Årsskrift utgiven av Smålands Nations Kamratförening i Uppsala.

¹⁹⁹ Vide C. P. Thunberg II, Journ. of S. Afr. Botany, Vol. V, Part III, July, 1939, p. 92.

P. S. PALLAS (Siberia), CHR. STEVEN (South Russia), K. L. PH. ZEYHER (Sicily).

Originally THUNBERG classified the herbarium according to the system of sexual characters modified by him, which he used in his floras and which comprised 20 classes, while LINNAEUS' classes XX—XXIII according to the characters based on the stamens were included in the preceding 19 classes.

Various catalogues of the THUNBERG Herbarium from different periods are still kept, two of these having been written by THUNBERG himself.

We have only seen the latest catalogue, dated 1820, forming two heavy volumes of folio size bound in leather. This catalogue was written by G. WAHLENBERG²⁰⁰ (*vide* Plate IV.) who was Botanical Demonstrator at Uppsala University from 1814. In this catalogue the THUNBERG Herbarium has been classified according to the original Linnean system, evidently to facilitate the including of the many additional genera in places of the system where they are introduced in after editions of LINNAEUS' publications.

The title-page of the WAHLENBERG catalogue reads as follows :

CATALOGUS

Naturalium

Academiae Upsaliensis

Herbarium

Tom : I Tom : II

1820.

Tom. I runs to 796 pages, while tom. II contains 393 pages apart from the Index Generum inserted at the back of the volume.

²⁰⁰ GÖRAN WAHLENBERG, who succeeded THUNBERG as a professor of botany at Uppsala University, was born at Kroppa in Värmland, October 1, 1780, and died at Uppsala, March 22, 1851. In 1806 he became a medical doctor and in 1829 he was called to occupy the chair of medicine and botany at Uppsala.

WAHLENBERG who travelled widely for scientific purposes, showed himself to be a keen-sighted explorer. He attempted several botanical-geographical expeditions to Lapland (4 times !), Norrland and Finmark in Norway, and to the high mountains of Central Europe, viz. the Swiss Alps and the North Carpathians. He was a first-rate botanist and a highly meritorious plantgeographer, and he should be regarded as the founder of physical plantgeography. He treated the Phanerogamae as well as the Cryptogamae, and of the former he published a monograph. He was also the author of other valuable botanical publications, including his "Flora Lapponica" (1812), "Flora Carpatorum Principalium" (1814) and "Flora Suecica" (1831-33).

The above data have been taken from Acta Horti Bergiani, Bd. III, No. 3 (1905), p. LXVIII of the preface, and p. 57. WAHLENBERG's portrait included with this article is from the same source.

We may add to this that his name is commemorated in the genus *Wahlenbergia* Schrad. (Campanulaceae), a large and widely-dispersed genus, chiefly from the southern hemisphere, and represented at the Cape by ca. 46 species.

The paper has been written on one side, the left pages of the catalogue having been kept blank for notes.

At the head of each page the tribus and classis are mentioned, like MONANDRIA—Monogynia, sometimes followed by the name of the genus.

This catalogue gives an enumeration of no less than 1863 genera.

At the back of each volume we find the following official statement²⁰¹) (*vide* Plate V.):

Att Deñe växt-Cataloge är enlig med skedd inventering, och de antekningar Inventerings Protocollet vidare innehåller intyga.

Uppsala ut Supra.

L. G. RABENIUS²⁰²).

tillkallad invent. man.

C. P. THUNBERG

Profestus Musei.

N. F. BIBERG²⁰³)

kgl. Acad. n.v. Rector

AD. AFZELIUS²⁰⁴)

tillkallad invent. man

GÖRAN WAHLENBERG

Botan. Demonstrator.

GABRIEL MARKLIN.²⁰⁵)

This "protocol" must have been written in the spring of 1819, as N. F. BIBERG was a Rector of the University only during the spring term of 1819 and earlier during the autumn term of 1812.

²⁰¹ Transl. : That this catalogue of plants is in accordance with the drawing up of the inventory which has taken place, and with the notices which the protocol of the drawing up of the inventory contains further, is testified by :

Uppsala as above.

L. G. RABENIUS
appointed invent. man.

C. P. THUNBERG
Profestus Musei.

GABRIEL MARKLIN.

N. F. BIBERG
R. Acad. n.v. Rector
AD. AFZELIUS
appointed invent. man.
GÖRAN WAHLENBERG
Botan. Demonstrator.

²⁰² LARS GEORG RABENIUS (1771-1846), "Jurisprudentiae, Oeconomiae et Commerciorum Professor" at Uppsala from 1807-37. He was one of the most famous Swedish jurists and author of valuable works on political economy. In 1837 he was knighted.

²⁰³ NILS FREDRIK BIBERG (1776-1827) became a professor of philosophy at Uppsala University in 1811.

²⁰⁴ ADAM AFZELIUS (1750-1836) was appointed a "Materiae Medicae et Diaet. Professor" at Uppsala in 1812 and published some autobiographic notes by LINNAEUS with annotations and an addendum ("Egenhändig anteckningar af Carl Linnaeus om sig sjelf med anmärkningar och tillägg," Uppsala, 1823).

²⁰⁵ GABRIEL MARKLIN (1777-1857) was an Amanuensis at the Museum of Natural History of the University of Uppsala from 1824-1852. (Probably he was appointed, if not officially, as early as 1819). In 1857 the honorary degree of doctor of philosophy was conferred on him. He is known as a collector of "Dissertationes Academicae" and between 1830 and 1840 a collection of 23,000 pamphlets was sold to the Kungl. Biblioteket (R. Library) at Stockholm. His very large collections of insects, shells, etc. were bequeathed to Uppsala University. He got his livelihood mainly by selling scientific pamphlets.

Under THUNBERG's successors G. WAHLENBERG and E. M. FRIES²⁰⁶ the herbarium remained in its original state. But then a period of inconceivable neglect followed, and when TH. M. FRIES²⁰⁷ was appointed a professor of botany and director of the Botanical Museum, he found the cases of the THUNBERG Herbarium empty, the entire collection having vanished! Later on the herbarium was re-discovered in the greatest disorder on the very bottom of the old building of the Museum! Fortunately only a very few specimens of the collection were lost. TH. M. FRIES had the collection arranged according to WAHLENBERG's catalogue and replaced it in the same old cases where it is still kept to this day.

Originally THUNBERG mounted his plants on rather thin paper of smaller size, viz. 21×33 cm. We know from a quotation from the "Travels"²⁰⁸ that he glued on the specimens during his journeys. Needless to say, the imperial paper he writes about is this thin smaller sized quality. Only a few specimens of the herbarium, for the greater part non-identified ones, still show the original fitting. Later on, after his return to Sweden, THUNBERG used stronger paper of larger size, viz. 24×37 cm., and the greater part of the older specimens were detached from the old paper and remounted upon the new one. In many cases he tore the lower margin from the old sheets, containing some notes, and attached these to the new paper.

THUNBERG himself added the scientific names to most specimens of his herbarium; he wrote these in the right-hand lower corner of the sheets. In cases where a species was represented by more than one specimen, he marked the sheets upon which the specimens were mounted,

²⁰⁶ ELLAS MAGNUS FRIES (1794-1878), professor of botany at Uppsala from 1851-1859, was an authority on the Scandinavian flora. He was also famous for his study of the gen. *Hieracium* and of the Hymenomycetes.

²⁰⁷ THORE MAGNUS FRIES (1832-1913) was a son of E. M. FRIES. He too became a botanist and was a professor of botany at Uppsala University from 1877-99. He took part in the two arctic expeditions of Prof. NORDENSKJÖLD (1868 and 1871) in which he investigated the vegetation of the Beren-Island, Spitzbergen and Greenland. He was well-known because of his profound knowledge of the Lichenes and has left many botanical publications. It was through his good offices that LINNAEUS' old country-seat "Hammarby" near Uppsala was acquired by the Swedish Government by which it was preserved for posterity. Moreover he deserved well of the botanical world by editing LINNAEUS' correspondence.

He was the father of ROBERT E. FRIES (born 1876), professor of botany at Stockholm University and a former director of the Hortus Bergianus (Bergianska Trädgården) from which office he retired in 1941, and also secretary of the Kungl. Vetenskapsakademien (Royal Academy of Science).

The FRIES family apparently does not feel like breaking with the botanical tradition, Prof. ROB. E. FRIES' elder son having taken up the study of botany too!

The above data about E. M. and TH. M. FRIES have been partly taken from Dr. C. A. BACKER, *Verklarend Woordenboek*, pp. 223-24. (1936).

²⁰⁸ Vide part II of this account, Journ. of S. Afr. Botany, July, 1939, p. 93.

either with Greek letters (which he usually did) or with consecutive numbers. Consequently no varieties are indicated with α , β , γ , etc.

In the left-hand lower corner of the sheet we find in several cases names, synonyms or quotations of figures. However, the country of origin (without stating the exact locality !) and the name of the collector he usually wrote on the back of the sheet in the left-hand top corner. So many of the sheets with Cape specimens are marked on the back : "*e Cap. bonae (or b.) spei. Thunberg,*" fewer : "*e Cap. bonae spei. Masson or Sparrman,*" which may be abbreviated in this account by "*Cap. Thunberg,*" "*Cap. Masson,*" etc.

It is much to be regretted that THUNBERG did not indicate the localities where he gathered the specimens, but as localities are often mentioned by THUNBERG in his "*Flora Capensis,*" he must have kept some separate record of them²⁰⁹.

Prof. T. T. BARNARD who has made a special study of Cape Iridaceae and has a good knowledge of the species represented in the THUNBERG Herbarium from the late N. E. BROWN's writings and personal correspondence with that outstanding systematist, has called our attention to the fact that according to N. E. BROWN's lists of THUNBERG's sheets there are some surprising second and third sheets included which are not at all like the type and from which it would appear that THUNBERG was not a very good botanist ! But in many cases these sheets are not his collection, but SPARRMAN's or MASSON's and there is some good reason to assume that THUNBERG incorporated them into his collection under his own sheets without paying any special attention to them, from which it may be concluded that he was not very interested in the work of others—even a great man may have his little weaknesses. . . .

Finally it may be mentioned that in several cases THUNBERG has altered the names which he had originally written with the plants. He erased the old name with a knife and replaced it by another one.

In the following enumeration we shall quote the names THUNBERG wrote with the specimens and the brief statement about origin and collector on the back of the sheets (if recorded). In addition to this we shall give the authority (in most cases THUNBERG himself) with an abbreviated bibliographical reference, chiefly the work in which the species has been originally published, further the valid name if the original one has not been retained, in some cases the names written on the sheets by some botanists who examined the herbarium, if they differ from the valid ones, and finally the name(s) of the botanist(s) who has (have) done the revising.

²⁰⁹ Vide : N. E. BROWN, A.L.S., "The South African Iridaceae of Thunberg's Herbarium," in *Linnean Society's Journal.—Botany*, Vol. xlviii, April, 1928, p. 16

Since we paid only a 9-days visit to Uppsala, and had to divide our time between the then Botanical Institute and the R. University Library, it will be easily understood that we had to confine ourselves to examining some special groups of plants.

Special attention was accordingly paid *inter alia* to the Proteaceae, insectivorous plants, Stapelieae, Euphorbias, Cape bulbs, Aloes. With the aid of the *Index Generum* of WAHLENBERG's catalogue we selected the Cape genera and other genera of plants which are represented at the Cape by a fair number of species.

The *Index Generum* which is alphabetically arranged, is headed by the gen. *Adansonia*, L. (Bombacaceae). In the THUNBERG Herbarium we find the "Baobab," *Adansonia digitata*, L., represented by a few leaves, without any statement as to their origin. Since the *Adansonia* is a native of tropical Africa, where it is widely spread, and does not occur farther South than S. Rhodesia and the northern districts of the Transvaal (*inter alia* in the Kruger National Park), THUNBERG who was never nearer than about 400 miles from that region, cannot have gathered those leaves himself, and it is a problem who sent them to him. Curiously enough, JUEL does not record the Baobab leaves in his "Plantae Thunbergianae."

In 1937 we found the herbarium in an excellent condition and it was really a wonderful experience to see the specimens collected by THUNBERG himself, by FRANCIS MASSON and others over 160 years ago! In several cases the colour of the flowers is still preserved.

Several outstanding botanists have worked on the THUNBERG Herbarium, of whom may be mentioned here—as far as the Cape specimens are concerned—the late Dr. N. E. BROWN, the late Dr. S. SCHÖNLAND, Dr. E. P. PHILLIPS, Dr. J. HUTCHINSON, Dr. R. A. DYER, and the earlier investigators J. G. BAKER and F. W. KLATT.

A CAPE SELECTION OF THE THUNBERG HERBARIUM AT UPPSALA.

PROTEACEAE.

We deliberately start with this family of plants since its South African representatives which are very numerous, may be ranked among the most outstanding botanical features of this southernmost part of Africa, the *Protea* even being considered as South Africa's national flower. For the non-S. African reader it may be mentioned here that a flower of a species of *Protea* has been depicted on stamps and on small silver coins (sixpence and threepence).

It is rather curious that of this vast and varied family of Proteaceae THUNBERG seems to recognize two genera only, viz. *Protea*, L. and *Brabeium*, L., for when examining his herbarium we find that the genus *Protea* also comprises those species which have been later on definitely ranged among the genera *Leucadendron*, Herm.,

Leucospermum, R. Br., *Mimetes*, Salisb., *Aulax*, Berg., *Serruria*, Salisb., *Dianella*, Knight, *Spatalla*, Salisb., *Spatalopsis*, Phillips, and some Australian genera, most of them having been already founded by contemporary botanists.

Protea, L.

1. *P. acaulis*, Thunb. Diss. Prot., p. 40 (1781).—Two sheets.—“Cap. Thunberg.”
 α = *P. glaucophylla*, Salisb.—PHILLIPS det.
 β . nova = idem.—PHILLIPS det. (JUEL in his “Plantae Thunbergianae” retained the Thunbergian name *P. acaulis* for both specimens).
2. *P. alba*, Thunb. Diss. Prot., p. 31 (1781).—One sheet.
 This is, according to PHILLIPS, *Leucadendron aurantiacum*, Buek.
3. *P. apifolia* (authority ?).—One sheet.
 This is *Isopogon anemonifolius*, Knight, an Australian species, presumably sent by ROBERT BROWN from Nova-Hollandia.—J. HUTCHINSON det.
4. *P. argentea*, L.; Thunb. Diss. Prot., p. 40 (1781).—Two sheets.—“Cap. Thunberg.”
 α and β = *Leucadendron argenteum*, (L.) R. Br., the Silver tree.—PHILLIPS det.
5. *P. aulacea*, Thunb. Diss. Prot., p. 31, tab. II (1781).—One sheet.—“Cap. Thunberg.”
 This is *Aulax cneorifolia*, Knight.—O. STAFF det.
6. *P. bracteata*, Thunb. Diss. Prot., p. 27, tab. I (1781).—One sheet.—“Cap. Thunberg.”
 Three branches of which 1 and 2 belong to *Aulax pinifolia*, Berg. and 3 to *A. pallasia*, Staff.—O. STAFF det.
7. *P. caudata*, Thunb. Diss. Prot., p. 26, tab. II (1781).—Two sheets.
 α = *Spatalopsis caudata*, (Thunb.) Phillips.—J. HUTCHINSON det.—“Cap. Masson.”
 β = idem.—J. HUTCHINSON det.—“Cap. Thunberg.”
8. *P. cinerea* (authority ?) = (cult.)—cf. *Leucadendron cinereum*, R. Br.—J. HUTCHINSON det.—See also *Protea verticillata*, Thunb. !
9. *P. coarctata*, Thunb. Mém. Pétersb., p. 547, tab. XV (1818).—One sheet.
 This is, according to J. HUTCHINSON, *Petrophila pulchella*, R. Br., an Australian species. However, we find stated by THUNBERG on the back of the sheet: “Cap. b. Spei. Masson,” so there must have been some confusion when mounting the specimens on the paper.
10. *P. comosa*, Thunb. Diss. Prot., p. 28 (1781).—Two sheets.
 α = *Leucadendron platyspermum*, R. Br.—PHILLIPS det.—“Cap. Thunberg.”
 β = *Leucadendron aemulum*, R. Br.—PHILLIPS det.—“Cap. Masson” !
11. *P. conifera*, Thunb. Diss. Prot., p. 37 (1781); non L.—Five sheets.—“Cap. Thunberg.”
 $P. conf.$ = *Leucadendron uliginosum*, R. Br.—PHILLIPS det.
 α and β = *L. adscendens*, R. Br.—PHILLIPS det.
 γ = *L. strictum*, R. Br.—PHILLIPS det.
 δ = *L. adscendens*, R. Br.—PHILLIPS det.
12. *P. conocarpa*, Thunb. Diss. Prot., p. 22 (1781).—Two sheets.—“Cap. Thunberg.”
 α (two branches) = *Leucospermum ellipticum*, R. Br. (non *L. conocarpum*,

- (Thunb.) R. Br.!).—O. STAFF det.
 β =idem.—O. STAFF det.
13. *P. cordata*, Thunb. Diss. Prot., p. 45, tab. V (1781).—One sheet.
 Very broad, nearly cordate leaves.
 14. *P. corymbosa*, (Berg.) Thunb. Diss. Prot., p. 29, tab. II (1781).—One sheet.—
 "Cap. Thunberg."
 σ and φ specimens=*Leucadendron corymbosum*, Berg.—PHILLIPS det.
 15. *P. crinita*, Thunb. Diss. Prot., p. 21 (1781).—One sheet.—"Cap. Thunberg."
 This is *Leucospermum crinitum*, (Thunb.) R. Br.—O. STAFF det.
 16. *P. cucullata*, L.; Thunb. Diss. Prot., p. 23 (1781).—Two sheets.—"Cap. Thunberg."
 α and β =*Mimetes lyrigera*, Knight.—PHILLIPS det.
 17. *P. cyanoides*, Thunb. Diss. Prot., p. 15 (1781); non L.—One sheet.—"Cap. Thunberg."
 This is *Serruria diffusa*, R. Br.—PHILLIPS det.
 18. *P. cynaroides*, L.; Thunb. Diss. Prot., p. 44 (1781).—One sheet.
 We find the marvellous "King Protea," the largest flowered species represented by a flower-head and the leaved top end of a branch (*vide* Plate VI.). THUNBERG has written on the back of the sheet: "e Cap. b. spei Thunb."
 19. *P. daphnoides*, Thunb. N. A. Petrop., p. 465, tab. VI: 2 (1806).—One sheet.—
 "Cap. Thunberg."
 This is *Leucadendron daphnoides*, (Thunb.) Meissn.—PHILLIPS det.
 20. *P. decumbens*, Thunb. Diss. Prot., p. 14, tab. I (1781).—One sheet, containing two specimens.—"Cap. Thunberg."
 α =*Serruria hyemalis*, Knight.—PHILLIPS det. November 15, 1910.
 21. *P. divaricata*, L.; Thunb. Diss. Prot., p. 44 (1781).—Two sheets.—"Cap. Thunberg."
 Two specimens (with very small leaves), both belonging to *Diastella serpyllifolia*, Knight.—J. HUTCHINSON det.
 22. *P. elliptica*, Thunb. Diss. Prot., p. 22 (1781).—One sheet.—"Cap. Thunberg."
 This is *Leucospermum attenuatum*, R. Br.—PHILLIPS et STAFF det.
 23. *P. erecta*, Thunb. N. A. Petrop., p. 459 (1806).—One sheet.
 This specimen has been identified by J. HUTCHINSON as belonging to the Australian Proteacea *Isopogon*, viz. *I. anethifolius*, Knight. On the back of the sheet we find recorded: "Nov. Holl."—Presumably sent to THUNBERG by ROBERT BROWN.
 24. *P. florida*, Thunb. Diss. Prot., p. 15, tab. I (1781).—One sheet.—"Cap. Thunberg."
 This is *Serruria florida*, (Thunb.) Knight, the "Blushing Bride."—PHILLIPS det.
 This species whose flowers are of extreme beauty and elegance, belongs to the botanical gems of the Frenchhoek mountains, where it is very scarce now.
 25. *P. glabra*, Thunb. Diss. Prot., p. 42 (1781).—One sheet.—"Cap. Thunberg."
 26. *P. glomerata*, Thunb. Diss. Prot., p. 18 (1781); non L.—One sheet.—"Cap. Thunberg."
 This is *Serruria elongata*, (Berg.) R. Br.—PHILLIPS det.
 27. *P. grandiflora*, Thunb. Diss. Prot., p. 41 (1781).—One sheet.—"Cap. Thunberg."

- The "Wagenboom" or "Wa'boom."
28. *P. heterophylla*, Thunb. Diss. Prot., p. 24 (1781).—Three sheets, α , β and β .—"Cap. Thunberg."
 α =*Leucospermum puberum*, R. Br. var. *patulum*.—O. STAFF det.
 β =*L. prostratum*, Stapf.—O. STAFF det.
 β =*L. hypophyllum*, R. Br.—PHILLIPS et STAFF det.
29. *P. hirsuta*, Thunb. Hoffm. Phyt. Blätt., p. 12 (1803).—One sheet.
 This is *Leucadendron Levisanus*, Berg.—PHILLIPS det. But named by JUEL in his "Plantae Thunbergianae": *Leucadendron hirsutum*, (Thunb.) Meissn.—On the back of the sheet we find recorded: "cult. in Horto Berolinensi. Hagen."
30. *P. hirta*, L.; Thunb. Diss. Prot., p. 43 (1781).—One sheet.
 This is *Mimetes hirta*, (L.) Knight—PHILLIPS det.
31. *P. hypophylla*, Thunb. Diss. Prot., p. 23 (1781).—Three sheets, β without record of origin.—"Cap. Thunberg."
 α =*Leucospermum hypophyllum*, (Thunb.) R. Br.—PHILLIPS et STAFF det.
 β =*L. tomentosum*, R. Br.—O. STAFF det.
 γ =*L. hypophyllum*, (Thunb.) R. Br.—PHILLIPS et STAFF det.
32. *P. imbricata*, Thunb. Diss. Prot., p. 38, tab. V (1781).—One sheet.
 This is *Sorocephalus imbricatus*, (Thunb. vel L.f.) R. Br.—J. HUTCHINSON det.
33. *P. incurva*, Thunb. Diss. Prot., p. 26, tab. III (1781).—One sheet.—"Cap. Thunberg."
 This is *Spatalla procera*, Knight.—PHILLIPS det.
34. *P. laevis*, Thunb. Mém. Pétersb., p. 548, tab. XVI (1818).—One sheet.—"Cap. Thunberg."
 This is *Leucadendron imbricatum*, R. Br.—PHILLIPS det.
35. *P. lanata*, Thunb. Diss. Prot., p. 30, tab. III (1781).—One sheet.
 This is *Sorocephalus lanatus*, (Thunb.) R. Br.—J. HUTCHINSON det.
36. *P. Levisanus*, (Berg.) Thunb. Diss. Prot., p. 37 (1781).—Three sheets.—"Cap. Thunberg."
 α , β =*Leucadendron Levisanus*, Berg.—PHILLIPS det.
 γ (nova)=*L. truncatum*, Meissn.—PHILLIPS det.
37. *P. linearis*, Thunb. Diss. Prot., p. 33, tab. VI (1781).—One sheet.—"Cap. Thunberg."
 This is *Leucospermum lineare*, (Thunb.) R. Br.—PHILLIPS det.
38. *P. macrocephala*, Thunb. Hoffm. Phyt. Blätt., p. 13 (1803).—One sheet.—"Cap. Thunberg."
 This is *P. incompta*, R. Br.—PHILLIPS det.—JUEL in his "Plantae Thunbergianae" retained the name *P. macrocephala* for this specimen.
39. *P. marginata*, Thunb. Hoffm. Phyt., Blatt. p. 15 (1803).—One sheet.—"Cap. Thunberg."
40. *P. mellifera*, Thunb. Diss. Prot., p. 34 (1781).—One sheet, with 2 big flower-heads. The "Suikerbos"!
41. *P. myrtifolia*, Thunb. Diss. Prot., p. 41 (1781).—One sheet.
 This is *Diastella myrtifolia*, (Thunb.) Knight.—J. HUTCHINSON det.
42. *P. nana*, (Berg.) Thunb. Diss. Prot., p. 30 (1781).—One sheet.—"Cap. Thunberg."

This is *P. rosacea*, L., the "Skaamblom," with its drooping red flower-heads.—PHILLIPS det.

43. *P. nitens*, Thunb. Fl. Cap., p. 514 (1813).—One sheet, containing two flower-heads.—"Cap. Thunberg."

This is probably *Mimetes saxatilis*, Phillips.—PHILLIPS det.—JUEL in his "Plantae Thunbergianae" named this species *Mimetes nitens*, (Thunb.) R. et Sch.

44. *P. obliqua*, Thunb. Diss. Prot., p. 35 (1781).—One sheet.—"Cap. Thunberg."

This is *Leucadendron plumosum*, R. Br.—PHILLIPS det.—JUEL in his "Plantae Thunbergianae" named this specimen *P. parviflora*, L.

45. *P. obtusa*, Thunb. = *P. obtusata*, Thunb. Hoffm. Phyt. Blätt., p. 15 (1803).—One sheet.—"Cap. Thunberg."

This is *Leucospermum obtusatum*, (Thunb.) Phill.—PHILLIPS det.

46. *P. odorata*, Thunb. Prodr., p. 187 (1800).—One sheet.—"Cap. Masson" !

47. *P. ovata*, Thunb. Mém. Pétersb., p. 548, tab. XVII (1818).—One sheet.—"Cap. Sparrman" !

This is *P. longiflora*, Lam.—PHILLIPS det.

48. *P. pallens*, Thunb. Diss. Prot., p. 36 (1781); non L.—Three sheets.—"Cap. Thunberg."

α and β = *Leucadendron adscendens*, R. Br.—PHILLIPS det.

γ = *L. adscendens*, R. Br. var. *pallens*, Phillips et Hutchinson.—PHILLIPS det.

49. *P. parviflora*, L.; Thunb. Diss. Prot., p. 35, tab. IV (1781).—One sheet.—"Cap. Thunberg."

This is *Leucadendron plumosum*, R. Br.—PHILLIPS det.

50. *P. patula*, Thunb. Diss. Prot., p. 16 (1781).—Two sheets.—"Cap. Thunberg."

α and β = *Serruria decipiens*, R. Br.—J. HUTCHINSON det.

51. *P. phylcoides*, (Berg.) Thunb. Diss. Prot., p. 19 (1781).—Four sheets.—"Cap. Thunberg."

α and β = *Serruria hirsuta*, (Poir.) R. Br.—J. HUTCHINSON det.

γ = *Serruria vallis*, Knight.—J. HUTCHINSON det.

P. phyl. ("dissecta") = *S. vallis*, Knight.—J. HUTCHINSON det.

52. *P. pinifolia*, L.; Thunb. Diss. Prot., p. 25 (1781).—One sheet.—"Cap. Thunberg."

This is *Aulax pinifolia*, Berg.—O. STAPP det.

53. *P. plumigera*, Thunb. Mém. Pétersb., p. 547, tab. XIV (1818).—One sheet.—"Cap. Masson" !

This is *Serruria simplicifolia*, (Poir.) R. Br.—PHILLIPS det.

54. *P. prolifera*, Thunb. Diss. Prot., p. 29, tab. IV (1781).—One sheet.—"Cap. Thunberg."

This is *Spatalla prolifera*, (Thunb.) Knight.—PHILLIPS et HUTCHINSON det.

55. *P. prostrata*, Thunb. Prodr., p. 27 (1794).—One sheet.—"Cap. Thunberg."

This is *Leucospermum prostratum*, (Thunb.) Stapf.—O. STAPP det. (see also under No. 28).

56. *P. pubera*, L.; Thunb. Diss. Prot., p. 42 (1781).—Four sheets.

α , β and γ = *Leucospermum puberum*, (L.) R. Br.—PHILLIPS det.

δ = *Diastella breviflora*, Knight.—PHILLIPS det.—"Cap. Thunberg."

57. *P. purpurea*, L.; Thunb. Diss. Prot., p. 28 (1781).—One sheet.—"Cap. Thunberg."

This is *Diastella ericaefolia*, Knight.—J. HUTCHINSON det.

58. *P. pyramidalis*, Thunb. Hoffm. Phyt. Blätt., p. 11 (1803).—One sheet.—“Cap. Thunberg.”
This is *Leucadendron decurrens*, R. Br.—PHILLIPS det.
59. *P. racemosa*, Thunb. Diss. Prot., p. 25 (1781); non L.—One sheet.—“Cap. Thunberg.”
This is *Spatalla gracilis*, Knight.—PHILLIPS et HUTCHINSON det.
60. *P. repens*, Thunb. Diss. Prot., p. 34 (1781).—One sheet.
Two branches; the left-hand specimen belongs to *P. repens*, Thunb., the right-hand specimen to *P. acaulis*, Thunb. var. *angustifolia*, Phillips.—PHILLIPS det.
61. *P. reticulata*, Thunb. Hoffm. Phyt. Blätt., p. 13 (1803).—One sheet.—“Cap. Thunberg.”
This is *P. grandiflora*, Thunb. var. *angustifolia*, Ker.—PHILLIPS det.
62. *P. rugosa*, Thunb. Hoffm. Phyt. Blätt., p. 11 (1803).—One sheet.—“Cap. Thunberg.”
This is *Leucadendron grandiflorum*, R. Br.—PHILLIPS det.
63. *P. saligna*, Thunb. Diss. Prot., p. 39 (1781); non L.—One sheet.—“Cap. Thunberg.”
This is *Leucadendron uliginosum*, R. Br.—PHILLIPS det. (see also under No. 11).
64. *P. scabrida*, Thunb. Hoffm. Phyt. Blätt., p. 14 (1803).—One sheet.—“Cap. Thunberg.”
This is *P. lepidocarpodendron*, L.—PHILLIPS det.
65. *P. scolymus*, Thunb. Diss. Prot., p. 33 (1781).—One sheet.—“Cap. Thunberg.”
This is *P. scolymocephala*, (L.) Reich.—Identified by?
66. *P. sericea*, Thunb. Diss. Prot., p. 39 (1781).—One sheet.
This is *Leucadendron sericeum*, (Thunb.) R. Br.—PHILLIPS det.
67. *P. serraria*, L.; Thunb. Diss. Prot., p. 17 (1781).—Six sheets, all but one
“Cap. Thunberg.”
 α and δ = *Serruria Knightii*, Hutchinson—J. HUTCHINSON det.
 β = *S. Burmanni*, R. Br.—J. HUTCHINSON det.
 γ and ϵ = *S. subsericea*, Hutchinson.—J. HUTCHINSON det.
 ζ (two specimens): the left-hand specimen belongs to *S. ciliata*, R. Br., the right-hand specimen is *S. decipiens*, R. Br.—J. HUTCHINSON det.—“Cap. Masson”!
68. *P. speciosa*, L.; Thunb. Diss. Prot., p. 42 (1781).—One sheet.—“Cap. Thunberg.”
69. *P. sphaerocephala*, Thunb. Diss. Prot., p. 16 (1781).—One sheet.—“Cap. Thunberg.”
This is *Serruria glomerata*, (L.) R. Br.—PHILLIPS det.
70. *P. strobilina*, Thunb. Prodr., p. 38 (1794); non L.—One sheet, containing two specimens.
Left-hand specimen = *Leucadendron spathulatum*, R. Br.—PHILLIPS det.
Right-hand specimen = *L. ovale*, R. Br.—J. HUTCHINSON det.
71. *P. tenuifolia*, Houtt.; Thunb. Hoffm. Phyt. Blätt., p. 9 (1803).—(Originally named by HOUTTUYN).—One sheet.—“Cap. Thunberg.”
This is *Leucadendron brunioides*, R. Br.—PHILLIPS det.
72. *P. tomentosa*, Thunb. Diss. Prot., p. 24 (1781).—Two sheets.
 α = *Leucospermum candicans*, Loud.—O. STAFF det. But according to

- JUEL in his "Plantae Thunbergianae" this is *L. tomentosum*, (Thunb.) R. Br.—"Cap. Thunberg."
 $\beta = L. tomentosum$, (Thunb.) R. Br.—PHILLIPS det.
73. *P. torta*, Thunb. Diss. Prot., p. 31 (1781).—One sheet.
 This is *Leucadendron brunioides*, Meissn. (non R. Br.!).—PHILLIPS det.
74. *P. totta*, L.; Thunb. Diss. Prot., p. 42 (1781).—One sheet.
 This is *Leucospermum tottum*, (L.) R. Br.—PHILLIPS det.
75. *P. triternata*, Thunb. Diss. Prot., p. 18 (1781).—One sheet.—"Cap. Thunberg."
 This is *Serruria anethifolia*, Knight.—J. HUTCHINSON det.
76. *P. truncata*, Thunb. N. A. Petrop., p. 462, tab. IV : 1 (1806).—One sheet.
 This is *Leucadendron truncatum*, (Thunb.) Meissn.—PHILLIPS det.
77. *P. umbellata*, Thunb. Diss. Prot., p. 31, tab. II (1781).—One sheet.
 This is *Aulax cneorifolia*, Knight.—O. STAFF det.—It may be mentioned that the specimen on the sheet is marked : "*Protea umbellata* Aulax ♀." On the back of the sheet : "Cap. Thunberg."
78. *P. venosa*, Thunb. Hoffm. Phyt. Blätt., p. 10 (1803).—One sheet.—"Cap. Thunberg."
 This is *Leucadendron decorum*, R. Br.—PHILLIPS det.
79. *P. verticillata*, Thunb. Hoffm. Phyt. Blätt., p. 12 (1803).—Two sheets.—"Cap. Thunberg."
 α and $\beta = Leucadendron cinereum$, R. Br.—PHILLIPS det.
80. *P. villosa*, Thunb. Prodr., p. 187 (1800).—One sheet.—"Cap. Masson"!
 This is *Serruria millefolia*, Knight.—J. HUTCHINSON det.
81. *P. virgata*, Thunb. Hoffm. Phyt. Blätt., p. 11 (1803).—Two sheets.—"Cap. Thunberg."
 α and $\beta = Leucadendron pubescens$, R. Br.—PHILLIPS det.
82. *Protea* 196.—Sheet, containing a leaved branch and a flower-head of the Australian "Waratah,"
Telopea speciosissima, R. Br.—J. HUTCHINSON det.

From the above enumeration it is learned that the *Proteas* as represented in the THUNBERG Herbarium include 16 species of *Protea*, 23 species of *Leucadendron*, 12 species of *Leucospermum*, 15 species of *Serruria*, 4 species of *Diastella*, 3 species of *Aulax*, 3 species of *Mimetes*, 3 species of *Spatalla*, 1 species of *Spatallopsis*, 2 species of *Sorocephalus*, while 4 specimens belong to species of the Australian genera *Isopogon* (2), *Petrophila* (1) and *Telopea* (1).

Proceeding to the genus *Brabeium*, L. (also spelled *Brabejum*), we find its only species, *B. stellatifolium*, L., the "Wild Almond," represented under the name *B. stellatum* (Thunb. Prodr., p. 31 (1794)). One sheet, marked on the back "Cap. Thunberg."

We may recall that the common name applied to this plant by THUNBERG in his "Travels" is "Wild Chestnuts" or "Wilde Castanien"²¹⁰.

DROSERACEAE.

This group of insectivorous plants, as represented in the THUNBERG Herbarium, numbers 11 species of *Drosera*, including 1 species of *Roridula*, of which 6 originate from the Cape, viz. :

²¹⁰ Vide Journ. of S. Afr. Botany, Vol. V, October 1939, Carl Peter Thunberg, etc. III, p. 114.

Drosera, L.

1. *D. acaulis*, L.f. Suppl., p. 188 ("Thunb.") (1781); Thunb. Prodr., p. 57 (1794); Diss. Dros., p. 5 (1797).—One sheet.—"Cap. Thunberg."

A very dwarf species!

2. *D. capensis*, L.; Thunb. Prodr., p. 57 (1794); Diss. Dros., p. 6 (1797).—One sheet.—"Cap. Thunberg."

The specimens of this fine Cape "Sundew" which grows *i.a.* on the slopes of Table Mountain, are well preserved and quite recognizable!

3. *D. cistiflora*, L.; Thunb. Prodr., p. 57 (1794); Diss. Dros., p. 6 (1797).—Two sheets, containing five plants.—"Cap. Thunberg."

D. cistifl. α and β . A large-flowering species!

4. *D. cuneifolia*, L.f. Suppl., p. 188 ("Thunb.") (1781); Thunb. Prodr., p. 57 (1794); Diss. Dros., p. 5 (1797).—Four sheets.

D. cuneifolia α , β and γ : "Cap. Thunberg"; idem δ : "Ceil. Thunberg" (?).

A species with small rosettes of short leaves.

5. *D. ramentacea*, Burch.—One sheet.—"Cap. Masson"!

6. *D. roridula*, Thunb. Diss. Dros., p. 7 (1797).—One sheet.—"Cap. Thunberg."

This is *Roridula dentata*, L.; Thunb. Prodr., p. 41 (1794).

A most remarkable plant and quite distinct from the gen. *Drosera* by its non-motile tentacles. Later botanists separated the gen. *Roridula*, of which 2 species only are known, from the *Droseraceae* and either classified it with the *Ochnaceae* or considered it as representing a family by itself, the *Roridulaceae*.

R. dentata is a more or less woody plant or shrub, known under the common name of "Fly-bush," which occurs in the Winterhoek Mountains and Cedarbergen and on the Cold Bokkeveld. The branches mounted on the sheet are very distinct by their woody character.

The other species is *R. gorgonias*, Planch. which is also a native of the western districts of the Cape.

Note. It is rather curious that the small red Cape "Sundew," *Drosera pauciflora*, Banks (syn. *D. trinervia*, Spreng.), with rosettes of tiny round leaves with reddish tentacles, a species which is rather common in the Peninsula (we found some specimens in dry places in the thicket of plants and shrubs near the Herbarium at Kirstenbosch), is *not* represented in the THUNBERG Herbarium.

EUPHORBIACEAE.

The above family as represented in the THUNBERG Herbarium includes many Cape plants, of which the genera *Cluytia* (also spelled *Clutia*) and *Euphorbia*, the former restricted to South Africa only, the latter represented by a great number of species—many of succulent character—may be mentioned here.

Follows an enumeration of the Cape Euphorbias.

Euphorbia, L.

1. *E. armata*, Thunb. Prodr., p. 86 (1800).—One sheet.—"Cap. Thunberg."

N. E. BROWN det.—This is not *E. loricata*, Lam. as named by JUEL in his "Plantae Thunbergianae."

2. *E. canariensis*, Thunb. Fl. japon., p. 196 (1794); non L.!—One sheet.—
“Cap. Thunberg.”
This is *E. Ledienii*, Berger.—N. E. BROWN det.
3. *E. coronata*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”
This is *E. clava*, Jacq.—N. E. BROWN det.
4. *E. elliptica*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”
N. E. BROWN det.
5. *E. fasciculata*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”
N. E. BROWN has written with the specimen: “*E. fasciculata*, Thunb.
The flowers do not belong to the plant, but to some species allied to *E.*
mauritanica, L.”
6. *E. genistoides*, Berg.; Thunb. Prodr., p. 86 (1800).—Two sheets, both marked
“Cap. Thunberg.”
7. *E. helioscopia*, L.; Thunb. Fl. japon., p. 197 (1794).—Two sheets.
The first sheet is marked on the back: “Japon. Thunberg,” the second
sheet: “Cap. Thunberg.” The specimen on the second sheet has been
identified by N. E. BROWN as *E. helioscopia*, L.
8. *E. hyberna*, Thunb. Mus. Upsal. XV, p. 123 (1794); non L.!—One sheet.—
“Cap. Thunberg.”
According to BOISSIER this specimen belongs to *E. characias*, L.
9. *E. mammillaris*, L.; Thunb. Prodr., p. 86 (1800).—One sheet.
10. *E. mauritanica*, L.; Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thun-
berg.”
BOISSIER et N. E. BROWN det.
11. *E. Medusae*, Thunb. Prodr., p. 86 (1800).—Three sheets.—“Cap. Thunberg.”
 α , β = *E. caput-medusae*, L.—N. E. BROWN det.
 γ = *E. hamata*, Sweet (syn. *E. cervicornis*, Boiss.).—N. E. BROWN det.
12. *E. muricata*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”
N. E. BROWN det.
13. *E. obtusata*, Thunb. herb. (non Pursh!)—Four sheets.—“Cap. Thunberg.”
E. obt. 1 = *E. Kraussiana*, Bernh. (not the var. of *erubescens*).—N. E.
BROWN det.
E. obt. 2 = *E. epicyparissias*, E. Mey. (syn. *E. involucrata*, E. Mey.).—
N. E. BROWN det.
E. obt. 3, 4 = *E. epicyparissias*, E. Mey. On sheet 4 THUNBERG has
recorded: “*E. Cap. bonae spei* in Lange Kloof.”—N. E. BROWN det.
14. *E. Peplus*, L.; Thunb. Fl. japon., p. 196 (1794).—One sheet.—“Cap. Thun-
berg.”
N. E. BROWN det.
15. *E. radiata*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg ad
Swartkopsrivier.”
This is *E. stellata*, Willd.—BOISSIER et N. E. BROWN det.
16. *E. reflexa*, Thunb. Mus. Upsal. auct., p. 12 (1827); non Spreng.!—One sheet.—
“Cap. Thunberg.”
This is *E. pinea*, L. according to BOISSIER.
17. *E. striata*, Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”
N. E. BROWN det.
18. *E. tirucalli*, Thunb. Prodr., p. 86 (1800); non L.!—Four sheets.—“Cap.
Thunberg.”
E. tirucalli 1: indeterminable, but not *E. tirucalli*, L. N. E. BROWN!

E. tiruc. 2 (two specimens): A=*E. decussata*, E. Mey., B=*E. Mundii*, N. E. Br.—N. E. BROWN det.

E. tiruc. 3 (two specimens): A=*E. Burmanni*, E. Mey., B=*E. arceuthoboides*, Boiss.—N. E. BROWN det.

E. tiruc. 4=*E. mauritanica*, L.—N. E. BROWN det.

19. *E. tuberosa*, L.; Thunb. Prodr., p. 86 (1800).—One sheet.—“Cap. Thunberg.”

N. E. BROWN det.

ASCLEPIADACEAE.

Apart from many species from Ceylon and Java, the above family as represented in the THUNBERG Herbarium includes a certain number of Cape plants belonging to different genera which have been revised by N. E. BROWN, and of which the “*Ceropegias*” (= *Microlooma*) and *Stapelieae* may be mentioned here.

Placed among the genus *Ceropegia*, L. we find two species, both belonging to the genus *Microlooma*, R. Br.

1. *C. sagittata*, L.; Thunb. Prodr., p. 37 (1794).—One sheet.—“Cap. Thunberg.”

This is *Microlooma sagittatum*, (L.) R. Br.—N. E. BROWN det.

2. *C. tenuifolia*, L.; Thunb. Prodr., p. 37 (1794).—One sheet.—“Cap. Thunberg.”

This is *Microlooma lineare*, R. Br. according to N. E. BROWN, but JUEL in his “*Plantae Thunbergianae*” retained the Linnæan specific name by naming the plant *M. tenuifolium*, (L.) K. Schum.

Stapelia, L.

This genus as represented in the THUNBERG Herbarium includes 1 species of *Brachystelma*, 4 (–5) species of *Stapelia*, 2 species of *Caralluma*, 1 species of *Trichocaulon* and a plant which has been separated from the genus *Stapelia* under the name *Diplocyatha ciliata*, (Thunb.) N. E. Br. (a monotypic genus).

1. *S. caudata*, Thunb. Prodr., p. 46 (1794).—One sheet.—“Cap. Thunberg.”

This is *Brachystelma caudatum*, (Thunb.) N. E. Br.—N. E. BROWN det. December, 1878!

2. *S. ciliata*, Thunb. Prodr., p. 46 (1794).—One sheet.—“Cap. Thunberg.”

This is *Diplocyatha ciliata*, (Thunb.) N. E. Br.—N. E. BROWN det.

3. *S. hirsuta*, L.; Thunb. Prodr., p. 46 (1794).—Two sheets.—“Cap. Thunberg.”
 α =according to N. E. BROWN: *Stapelia* (§ *Stapeltonia*) *sp.* (non *hirsuta*, L.), Journ. Linn. Soc., Vol. XVII, tab. II f. 18-21.

β =*Stapelia* (§ *Stapeltonia*) *sp.* (non *hirsuta*, L.) N. E. BROWN in Journ. Linn. Soc., Vol. XVII, f. 22-23.

4. *S. incarnata*, L.f. Suppl., p. 171 (“Thunb.”) (1781); Thunb. Prodr., p. 46 (1794).—One sheet.—“Cap. Thunberg.” Some parts of the stem only.

This is *Caralluma incarnata*, (L.f.) N. E. Br.—N. E. BROWN det.

5. *S. mammillaris*, L.; Thunb. Prodr., p. 46 (1794).—One sheet.—“Cap. Thunberg.”

This is *Caralluma mammillaris*, (L.) N. E. Br.—N. E. BROWN det.

6. *S. pilifera*, L.f. Suppl., p. 171 ("Thunb.") (1781); Thunb. Prodr., p. 46 (1794). One sheet.—"Cap. Thunberg." Two stems and two flowers separately glued on the paper.

This is *Trichocaulon piliferum*, (L.f.) N. E. Br.—N. E. BROWN det.

7. *S. planiflora*, Jacq. (§ Orbea).—Two sheets.—"e Cap., cult. in H. Upsal. Thunberg."

1) Branchlet with flower; ring and corona very distinct.

2) Burst fruit with seeds and cuts of the stem without flowers.

All taken from specimens cultivated in the Botanic Garden at Uppsala.

1) and 2) really belonging to *S. planiflora*, Jacq.—N. E. BROWN det.

8. *S. variegata*, L.; Thunb. Prodr., p. 46 (1794).—One sheet.—"Cap. Thunberg." Parts of the stem; stem with flower (damaged); separate flower.—*S. variegata*, L. ! N. E. BROWN det.

9. *S. fasciculata*, Thunb. Prodr., p. 46 (1794).—One sheet.—"Stapelia—Cap. Thunberg." Part of the stem without flowers, but with bursting fruits with the tufts of long silky hairs protruding.

Probably *S. fasciculata*, Thunb. according to N. E. BROWN.

AMARYLLIDACEAE.

Of this group of bulbous plants we examined the genus *Hypoxis*, L.

The species of *Hypoxis* as represented in the THUNBERG Herbarium apparently have been revised by some botanist (perhaps a S. African) whose name has not been written on the sheets, after JUEL's "Plantae Thunbergianae" has been published, the new names having not been included in the book.

1. *H. alba*, (Thunb.) L.f. Suppl., p. 198 ("Thunb.") (1781); Thunb. Prodr., p. 60 (1794); syn. *Fabricia alba*, Thunb. in Fabricius' Reise, p. 25 (1779).—Four sheets.—"Cap. Thunberg."

All specimens belong to *Janthe aquatica*, (L.f.) Williams.—Revised by ?—JUEL retained the Linnean name *H. alba*.

2. *H. decumbens*, Lam. (non L.)=*H. villosa*, (Thunb.) L.f. (see below under No. 8).
3. *H. minuta*, (Thunb.) L.f. 1781; Thunb. Prodr., p. 59 (1794); syn. *Fabricia minuta*, Thunb. in Fabricius' Reise, p. 25 (1779).—One sheet.—"Cap. Thunberg."

This species, the smallest of all, has been separated from this genus and included in the gen. *Janthe* under the name *J. minuta*, (Thunb.) Williams.—Revised by ?—JUEL retained the Linnean name *H. minuta*.

4. *H. ovata*, L.f. Suppl., p. 197 ("Thunb.") (1781); Thunb. Prodr., p. 60 (1794).—Three sheets, α , β and γ .—"Cap. Thunberg." On sheet γ marked "nova."

JUEL retained the Linnean name *H. ovata*, but it has been renamed *Janthe ovata*, (L.f.) Salisb. by ?

5. *H. plicata*, (Thunb.) L.f. Suppl., p. 197 ("Thunb.") (1781); Thunb. Prodr., p. 60 (1794); syn. *Fabricia plicata*, Thunb. in Fabricius' Reise, p. 29 (1779); *Curculigo plicata*, (Thunb.) Ait.

JUEL retained the latter name, *Curculigo plicata* (non Dryander !), but this species has been renamed *Forbesia plicata*, (Thunb.) Nel. Revised by ?

6. *H. serrata*, (Thunb.) L.f. Suppl., p. 197 ("Thunb.") (1781); Thunb. Prodr., p. 60 (1794); syn. *Fabricia serrata*, Thunb. in Fabricius' Reise, p. 29 (1779).—Two sheets, α (type) and β .—"Cap. Thunberg."

This is *Janthe serrata*, (Thunb.) Salisb. Revised by ?—JUEL in his book retained the Linnean name *H. serrata*.

7. *H. stellata*, (Thunb.) L.f. Suppl., p. 197 ("Thunb.") (1781); Thunb. Prodr., p. 60 (1794); syn. *Fabricia stellata*, Thunb. in Fabricius' Reise, p. 27 (1779).—Three sheets.—"Cap. Thunberg."

Sheet α (type), labelled "*Fabricia stellata*" by THUNBERG.

This is *Janthe stellata*, (Thunb.) Williams.—Named by ?

8. *H. villosa*, (Thunb.) L.f. 1781; Thunb. Prodr., p. 60 (1794); syn. *Fabricia villosa*, Thunb. in Fabricius' Reise, p. 31 (1779); *Hypoxis decumbens*, Lam. (non L.!).—Six sheets.—"Cap. Thunberg."

H. v. a. stalks and leaves very hairy, feltlike.

H. v. b., less hairy.

H. v. c., of different habit, long and slender; labelled by THUNBERG :

"*Hypoxis villosa c.* an diversa nova ?"

H. v. d., labelled by THUNBERG : "*Hypoxis villosa d.* nov. ?"

H. decumbens, two sheets from the Cape, β and γ .

All belonging to *H. villosa*, (Thunb.) L.f.—Determined by ?

IRIDACEAE.

The South African Iridaceae of the THUNBERG Herbarium have been described and revised by the late Dr. N. E. BROWN, A. L. S. in Journal of the Linnean Society.—Botany, Vol. xlviii, April, 1928. This is a very useful paper which ought to be consulted by any systematist who works in the S.A. Iridaceae.

When examining the Herbarium Thunbergianum, we picked out the *Gladioli* and *Ixiae* of which a complete survey may be given here.

Gladiolus, L.

This numerous S. African genus as represented in THUNBERG's Herbarium includes species of *Micranthus*, *Galaxia*, *Synnotia*, *Lapeyrouisia* (many !), *Tritonia*, *Babiana*, *Hesperantha*, *Watsonia* (many !), *Acidanthera*, *Antholyza*, *Ixia*, *Freesia*, *Romulea*, *Melaspheerula*.

1. *G. alatus*, L.; Thunb. Diss. Glad., p. 16 (1784).—One sheet.—"Cap. Thunberg."

N. E. BROWN has retained the name *G. alatus*, L. (1760).

2. *G. alopecuroides*, L.; Thunb. Diss. Glad., p. 15 (1784).—Three sheets, α , β and the third one not lettered.—"Cap. Thunberg."

α = *Micranthus alopecuroides*, (L.) Eckl. and matches the type of *G. alopecuroides*, L. (1756); it is not *M. plantagineus*, Eckl. as named by KLATT.

β = *Micranthus plantagineus*, (L.) Eckl., not *M. fistulosus*, Eckl. as named by KLATT.

The third sheet contains leaves only, which belong to *Micranthus fistulosus*, Eckl.

N. E. BROWN does not agree with JUEL, who claims that all three belong to *M. plantagineus*, (L.) Eckl.

3. *G. anceps*, L.f.; Thunb. Diss. Glad., p. 17, tab. 2 (1784).—One sheet.—“Cap. Thunberg.”

This is *Lapeyrousia anceps*, (L.f.) Baker, Handb. Irid., p. 172 (1892), not of Ker!

4. *G. angustus*, L.; Thunb. (“angustus”) Diss. Glad., p. 19 (1784).—One sheet.—“Cap. Thunberg.”

N. E. BROWN: This is *G. vinulus*, Klatt=MACOWAN, Herb. Norm. 287! Not *G. fasciatus*, Roem. et Sch.=*G. angustus*, Klatt non Thunb.

5. *G. bicolor*, Thunb. Diss. Glad., p. 16, tab. 2 (1784).—Two sheets.—“Cap. Thunberg.”

Both sheets contain specimens of *Synnotia bicolor*, (Thunb.) Sweet. (according to JUEL and N. E. BROWN).

6. *G. bracteatus*, Thunb. Prodr., p. 186 (1800), and in Nat. Selsk. Köbenh., p. 12, tab. III (1810).—Two sheets.—“Cap. Thunberg.”

Both are *Lapeyrousia fissifolia*, (Jacq.) Ker (according to JUEL and N. E. BROWN).

7. *G. brevifolius*, Jacq.; Thunb. Nat. Selsk. Köbenh., p. 3 (1810); *G. tristis* i. aphyllus et k. ruber Thunb. Diss. Glad., p. 12 (1784).—Two sheets. On the back of sheet a is written: “e Cap. bonae spei. prope urbem. Thunberg.”

Both appear to be *G. brevifolius*, Jacq. as named by THUNBERG. Identified by JUEL and N. E. BROWN.

8. *G. bullatus*, Thunb. MS in Herb. (not in Diss. Glad., p. 12 (1784), as quoted by JUEL).—One sheet.—“Cap. Thunberg.”

According to N. E. BROWN and Mrs. L. BOLUS this is *G. spathaceus*, Pappe and not *G. inflatus*, Thunb. as named by KLATT and quoted by JUEL.

9. *G. communis*, Thunb. Diss. Glad., p. 13 (1784).—One sheet marked β . This is *G. segetum*, Ker, and the locality “e Cap. b. spei” is probably wrong (N. E. BROWN).

10. *G. cordatus*, Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg.”

This is not *G. angustus*, L. as named by KLATT and BAKER and quoted by JUEL.

11. *G. crispus*, L.f.; Thunb. Diss. Glad., p. 10, tab. 1 (1784).—One sheet.—“Cap. Thunberg.”

This is *Tritonia crispa*, (L.f.) Ker, which agrees with the type of *G. crispus*, L.f. (1781).

The edges of the leaves are crisped and waved.

12. *G. dichotomus*, Thunb. Diss. Glad., p. 10 (1784).—One sheet.—“Cap. Thunberg.”

This is not *G. permeabilis*, De la Roche, as BAKER states, but *Romulea dichotoma*, (Thunb.) Baker. It is named by JUEL *G. permeabilis*, *Burm.*

13. *G. elongatus*, Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg.”

N. E. BROWN has reason to retain the Thunbergian name *G. elongatus*. It is not all like *G. gracilis*, Jacq., under which BAKER has placed it and which has been retained by JUEL, nor like *G. strictus*, Jacq., as KLATT has named it on the sheet.

14. *G. equitans*, Thunb. Prodr., p. 186 (1800), and in Nat. Selsk. Köbenh., p. 11, tab. 2 (1810).—One sheet.—“Cap. Thunberg.”

A broad-leaved, large-flowering species. N. E. BROWN has retained the

Thunbergian name *equitans* (syn. *G. namaquensis*, Ker). It is perfectly distinct from *G. alatus*, L. as KLATT has named it on the sheet, nor is it a variety of that species as quoted by JUEL, viz. *G. alatus*, L. var. *namaquensis*, Ker.

15. *G. exscapus*, Thunb. Prodr., p. 184 (1800), and in Nat. Selsk. Københ., p. 3, tab. 1 (1810).—Two sheets.—“Cap. Thunberg.”

This is *Acidanthera exscapa*, (Thunb.) Baker (1876), not *A. tubulosa*, (Houtt.) Baker, as quoted by JUEL, which was founded upon *Ixia tubulosa*, Houttuyn, “Handleiding,” XII, p. 36, tab. 78, fig. 2, whose flowers are different from those of *A. exscapa*.

16. *G. Fabricii*, Thunb. Prodr., p. 186 (1800).—One sheet.—“Cap. Thunberg.”

This is *Lapeyrousia Fabricii*, (Thunb.) Ker.

17. *G. falcatus*, L.f. Suppl., p. 96 (“Thunb.”) (1781); Thunb. Diss. Glad., p. 10, tab. 1 (1784).—One sheet.—“Cap. Thunberg.”

This is *Lapeyrousia falcata*, (L.f.) Ker in KÖNIG and SIMS, Ann. Bot. i, p. 238 (1804). Not *Hesperantha falcata*, Ker as named by KLATT on the sheet.

18. *G. flexuosus*, L.f. Suppl., p. 96 (“Thunb.”) (1781); Thunb. Diss. Glad., p. 9, tab. 1 (1784).—One sheet.—“Cap. Thunberg.”

According to N. E. BROWN this specimen is identical with the type of *G. flexuosus*, L.f. and equals *Acidanthera flexuosa*, (L.f.) Baker, as JUEL has named it. But as the perianth is irregular, it may be wondered why it is not true *Gladiolus*.

19. *G. glutaceus*, Thunb. Prodr., p. 186 (1800).—One sheet.—“Cap. Thunberg.”

This species equals *Watsonia marginata*, (L.f.) Ker, according to BAKER and JUEL in his “Plantae Thunbergianae,” but is not *W. iridifolia*, Sweet, as named by KLATT on the sheet.

20. *G. gracilis*, Jacq.; Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg.”

Like JUEL, N. E. BROWN retains the name *G. gracilis*, Jacq. (1790).

21. *G. gramineus*, L.f.; Thunb. Diss. Glad., p. 22 (1784).—Two sheets.—“Cap. Thunberg.”

Both *Melasmaerula graminea*, (L.f.) Ker.

22. *G. grandis*, Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg.”
The type of the spec. *G. grandis*, Thunb.

23. *G. hastatus*, Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg.”

According to N. E. BROWN this specimen is the type of *G. hastatus*, Thunb.; it is much like *G. inflatus*, Thunb. (not of Baker!), but differs in having the lower middle segment marked with a hastate (yellow?) spot outlined with dark red or purple.

24. *G. inflatus*, Thunb. Prodr., p. 185 (1800).—Two sheets.—“Cap. Thunberg.”

N. E. BROWN retained the name *G. inflatus*, Thunb. [syn. *G. Bolusii*, Baker (1892)].

25. *G. ixioides*, Thunb. Fl. Cap., p. 208 (1811).—One sheet.—“Cap. Thunberg.”

This is *Ixia paniculata*, De la Roche, not *Tritonia longiflora*, Ker, as named by KLATT on the sheet.

26. *G. junceus*, L.f. Suppl., p. 96 (“Thunb.”) (1781); Thunb. Diss. Glad., p. 18 (1784).—One sheet.—“Cap. Thunberg.”

This is *Lapeyrousia juncea*, (L.f.) Pourr., not *Anomatheca juncea*, Ker, as named by KLATT.

27. *G. laccatus*, Thunb. Prodr., p. 186 (1800).—One sheet.—“Cap. Thunberg.”

N. E. BROWN identified this specimen as the type of *G. laccatus*, Thunb. [syn. *G. villosus*, Ker (1827)]. It is not *G. pilosus*, Eckl., as named by KLATT on the sheet.

28. *G. laevis*, Thunb. Prodr., p. 184 (1800).—One sheet.—“Cap. Thunberg.”

This is *G. tenellus*, Jacq., and not *G. gracilis*, Jacq. under which name BAKER places it. According to N. E. BROWN, JUEL and KLATT.

29. *G. laxus*, Thunb. Fl. Cap. ed. Schultes, p. 50 (1823).—One sheet.—“Cap. Thunberg.”

This is *Lapeyrousia laxa*, (Thunb.) N. E. Br. comb. nov. Other synonyms are: *Meristostigma laxum*, A. Dietr. (1833); *Anomatheca cruenta*, Lindl. (1830); *Lapeyrousia cruenta*, (Lindl.) Baker (1892). It is not *Tritonia longiflora*, as named by KLATT on the sheet.

30. *G. longiflorus*, L.f. Suppl., p. 96 (“Thunb.”) (1781); Thunb. Diss. Glad., p. 19 (1784).—Two sheets.—“Cap. Thunberg.”

Both are the same plant and equal *G. longiflorus*, L.f., but since THUNBERG's specimens of this species belong to the genus *Tritonia*, and, as *Tritonia longiflora*, Ker belongs to the genus *Ixia*, N. E. BROWN writes that there is no reason why the Linnean and Thunbergian specific name should not be conserved under *Tritonia*, and he therefore proposes the name *Tritonia longiflora*, (L.f.) N. E. Br. comb. nov.

It is not *Ixia paniculata*, Delar., as proposed by JUEL, nor *Montbretia striata*, Baker, as written on the sheets by BAKER, which name is a synonym of *Tritonia Bakeri*, Klatt.

31. *G. marginatus*, L.f.; Thunb. Diss., Glad., p. 18 (1784).—Five sheets, each containing a different species.—“Cap. Thunberg.”

α = *Watsonia Schlechteri*, L. Bolus (not *W. Pillansii*, L. Bolus as proposed by Mrs. BOLUS, nor *W. roseo-alba*, Gawl, as written on the sheet by KLATT).

β = *Watsonia Ardernei*, Sander (not *W. marginata*, Gawl, as named by KLATT on the sheet).

γ = *Watsonia Meriana*, Miller (not *W. fulgida*, Sal., as named by KLATT).

δ = *Watsonia brevifolia*, Ker (not *W. humilis*, Gawl, as written on the sheet by KLATT).

ϵ = *Watsonia humilis*, Miller (not *W. Meriana*, Gawl, as named by KLATT).

N. E. BROWN does not agree with JUEL who identified the 5 specimens with *W. marginata*, (L.f.) Ker.

32. *G. merianellus*, (L.) Thunb. Diss. Glad., p. 14 (1784).—One sheet.—“Cap. Thunberg.”

This is *Antholyza merianella*, L. Not *Gladiolus Watsonius*, Thunb., as named by KLATT.

33. *G. merianus*, (L.) Thunb. Diss. Glad., p. 14 (1784).—Two sheets.—“Cap. Thunberg.”

Both are *Watsonia aletroides*, (Burm.) Ker.

34. *G. montanus*, L.f.; Thunb. Diss. Glad., p. 9, tab. 1 (1784).—One sheet.—“Cap. Thunberg.”

This is *G. parviflorus*, Jacq. 1771 [syn. *G. montanus*, L.f. (1781); *G. arenarius*, Baker (as written on the sheet by BAKER); *Hebea orchidiflora*, Eckl. and H. *tabularis*, Eckl. (1827); *Antholyza montana*, Klatt and A. *orchidiflora*, Klatt (1863) and A. *fragrans*, E. Meyer ex Klatt (1882)].

JUEL in his book has retained the Linnean specific name *G. montanus*.

35. *G. plicatus*, Thunb. Diss. Glad., p. 20 (1784); non L.—Seven sheets.—“Cap. Thunberg.”

α =*Babiana stricta*, Ker ex Baker (not *B. villosa*, Ker, as named on the sheet by KLATT).

β =*Babiana* sp. (ZEYHER 4001) placed under *B. stricta* by BAKER, but as defined by him *B. stricta* is a mixture of several species. It is not *B. villosa*, Ker, as named by KLATT.

γ =*Babiana disticha*, Ker (not *B. villosa*, Ker, as named by KLATT).

δ =belongs to two different species of *Babiana*, the left-hand specimen is the same as a specimen at Kew from Lion Mountain named “*B. coerulescens*” by someone, and by BAKER called *B. plicata*, Ker; the right-hand specimen is the same as DRÈGE 8384, named *B. plicata* by BAKER (neither being *B. villosa*, Ker, as named on the sheet by KLATT).

ϵ =*Babiana* sp., which N. E. BROWN failed to identify. Not *B. villosa*, Ker, as named by KLATT!

ζ =*Babiana* sp. Not *B. mucronata*, Gawl, as written on the sheet by KLATT.

η =*Babiana plicata*, (Thunb.) Ker. Not *B. sulphurea*, Ker, as named by KLATT.

36. *G. punctatus*, Thunb. Prodr., p. 185 (1800).—One sheet.—“Cap. Thunberg”. N. E. BROWN has retained the Thunbergian name *G. punctatus* (not of Jacquin!). It is not *G. carneus*, De la Roche, as named by KLATT.

37. *G. recurvus*, Thunb. Diss. Glad., p. 9 (1784); non L.!—Two sheets, each containing a different species.—“Cap. Thunberg.”

α =*Hesperantha recurva*, (Thunb.) Ascherson et Graebner. Not *Hesperantha graminifolia*, Sweet, as named on the sheet by KLATT.

β =*Hesperantha setacea*, Eckl. Not *H. radiata*, Gawl, as named by KLATT.

JUEL has placed both specimens under *H. radiata*, (Jacq.) Ker.

38. *G. ringens*, Thunb. Prodr., p. 186 (1800).—Five sheets, each containing a different species of *Babiana*.—“Cap. Thunberg.”

α =MACOWAN, Herb. Norm. Austr. Afr., 273, placed under *Babiana plicata*, (Thunb.) Ker by BAKER. Not *B. nana*, Spreng. as named by KLATT.

β =ZEYHER 1616, *Babiana* sp. Not *B. obtusifolia*, Jacq., as named by KLATT.

γ =*Babiana* spp.; the right-hand specimen is indeterminable, the left-hand specimen is the same as a specimen at Kew from Riebeeck Kasteel without number or name of collector. Neither of them being *B. sambucina*, Gawl, as named by KLATT.

δ , two specimens, belonging to different species, neither of them *B. reflexa*, Eckl., as named by KLATT. The left-hand specimen is *Babiana disticha*, Ker, the right-hand specimen is a *Babiana* sp. which could not be determined.

ϵ =a very distinct species of *Babiana* which like the specimens on sheets β and γ could not be identified. It is not *B. mucronata*, Jacq., as named by KLATT.

39. *G. secundus*, Thunb. Prodr., p. 186 (1800), and in Nat. Selsk. Kjöbenhavn., p. 14, tab. 4 (1810).—One sheet.—“Cap. Thunberg.”

This is *Babiana secunda*, (Thunb.) Ker. The colour of the flower, a lilac-blue shade, is well preserved. *B. reflexa*, Eckl. as named by KLATT, is a synonym.

40. *G. setifolius*, L.f. Suppl., p. 96 ("Thunb.") (1781); Thunb. Diss. Glad., p. 18 (1784).—One sheet.—"Cap. Thunberg."
This is *Lapeyrouisia setifolia*, (L.f.) N. E. Br. comb. nov.; syn. *L. divaricata*, Baker (not *Anomatheca juncea*, Gawl, as named by KLATT on the sheet).
41. *G. Sparrmannii*, Thunb. Vet. Acad. Handl., p. 189, tab. IXA (1814).—Two sheets.
 α =*Freesia Sparrmannii*, (Thunb.) N. E. Br. (not *F. refracta*, Klatt, as named by KLATT on the sheet).—"Cap. Sparrman"!
 β =possibly a var. of the plant known in gardens as *F. refracta alba* (= *F. lactea*, Fenzl.) with the segments purple on the back; the colour of the flower in this specimen is well preserved and quite distinct.—Not. *F. refracta*, as named by KLATT.—"Cap. Thunberg."
42. *G. spathaceus*, L.f. Suppl., p. 96 ("Thunb.") (1781); Thunb. Diss. Glad., p. 22 (1784).—One sheet.—"Cap. Thunberg."
This is *Babiana spathacea*, (L.f.) Ker, and must be taken as the type of *G. spathaceus*, L.f. (1781). Not *B. tubiflora*, Gawl, as written on the sheet by KLATT.
43. *G. speciosus*, Thunb. Fl. Cap. ed. Schultes, p. 48 (1823).—One sheet.—"Cap. Thunberg."
This species is omitted from JUEL's "Plantae Thunbergianae."
44. *G. spicatus*, L.; Thunb. Diss. Glad., p. 15 (1784).—One sheet.—"Cap. Thunberg."
A species of *Watsonia*; BAKER and KLATT considered it to be *W. punctata*, Ker, but it seems to differ in having flat leaves.
45. *G. spiralis*, Pers.; Thunb. Herb. (first named by PERSOON).—Two sheets.—"Cap. Thunberg."
 α , left-hand specimen=*Watsonia brevifolia*, Ker; right-hand specimens (2)=*W. humilis*, Miller (det. L. BOLUS!).
 β =*W. roseo-alba*, Ker, according to Mrs. BOLUS. It is not *W. brevifolia*, Gawl, as named by KLATT, nor *W. humilis*, Mill., as named by BAKER. JUEL erroneously placed both specimens under *G. tristis*, L.
46. *G. tenellus*, Jacq.; Thunb. Prodr., p. 185 (1800).—Two sheets.—"Cap. Thunberg."
 α =very likely *G. tenellus*, Jacq. and not *G. trichonemifolius*, Ker, as named by KLATT on the sheet.
 β =*G. trichonemifolius*, Ker, as named by KLATT.
47. *G. trinervis*, Thunb. Mus. nat. Upsal., Append. XXII, p. 27 (1814), name only.—One sheet.—"Cap. Thunberg."
This is *G. parviflorus*, Jacq. (syn. *G. montanus*, L.f.; *Antholyza orchidiflora*, Klatt, as written on the sheet by KLATT, and *Gladiolus* (*Schweiggera*) *arenarius*, Baker, as named by BAKER).
48. *G. tristis*, L.; Thunb. Prodr., p. 8 (1794).—Five sheets, containing three different species.—"Cap. Thunberg." (β and γ without record of origin).
 α =*Gladiolus* sp. (could not be identified).
 β =*G. maculatus*, Sweet.
 γ , δ and ϵ =*G. confusus*, N. E. Br. (syn. *G. tenellus*, Baker, not of Jacquin, as quoted by KLATT). JUEL retained the Linnean name *G. tristis*.
49. *G. triticeus*, Thunb. Fl. Cap., p. 194 (1811).—One sheet.—"Cap. Thunberg."
This is *Watsonia subulata*, Klatt (syn. *G. subulatus*, Vahl; *G. triticeus*,

- Thunb. ; *W. punctata*, Ker var. *triticea*, (Thunb.) Baker, as named by JUEL (the authority "Baker" has been erroneously omitted).
50. *G. tubiflorus*, L.f. Suppl., p. 96 ("Thunb.") (1781); Thunb. Diss. Glad., p. 20, tab. 2 (1784).—One sheet.—"Cap Thunberg."
- This is *Babiana tubiflora*, (L.f.) Ker, and must be considered as the type of *G. tubiflorus*, L.f. which was described from a specimen collected by THUNBERG.
51. *G. undulatus*, Jacq.; Thunb. Prodr., p. 186 (1800).—Four sheets.—"Cap. Thunberg" (a without record of origin).
- α =*G. cuspidatus*, Jacq. ex Baker, not *G. Milleri*, Ker, as named by KLATT.
- β =the same plant as ZEYHER 1631, placed by BAKER under *G. cuspidatus*, Jacq., but it is doubtful if it is identical with that species. Not *G. angustus*, Ker, as named by KLATT.
- γ =*G. undulatus*, Jacq.
- δ =*G. cuspidatus*, Jacq.
52. *G. virescens*, Thunb. Fl. Cap., p. 196 (1811).—Two sheets.—"Cap. Thunberg."
- α =*G. virescens*, Thunb. (syn. *G. bicolor*, Baker (1877) !). The two specimens on the paper both belong to one species, and neither of them is *G. formosus*, Klatt, nor *G. viperatus*, Ker, as written on the sheet by KLATT.
- β =*G. pulchellus*, Klatt.
53. *G. Watsonius*, Thunb. Diss. Glad., p. 14 (1784).—Two sheets.—"Cap. Thunberg."
- α =*Antholyza revoluta*, Burm.
- β =*Watsonia spectabilis*, Schinz.

IXIA, L.

This S. African genus as represented in the THUNBERG Herbarium includes species of the genera *Geissorhiza* (many!), *Sparaxis*, *Romulea*, *Hesperantha*, *Lapeyrousia*, *Tritonia*, *Nivenia* (1), *Gladiolus*, *Dierama* (1) and one species of *Pauridia*, a genus belonging to the Amaryllidaceae.

1. *I. aristata*, Thunb. Diss. Ixia, p. 14 (1783).—Four sheets.—"Cap. Thunberg."
- α =*I. aristata*, Thunb. (1783), not of Ker, nor of BAKER. Not *I. conica*, Salisb., as named by KLATT on the sheet.
- β =*I. elegans*, N. E. Br. comb. nov. (syn. *I. aristata* var. *elegans*, Baker, Handb. Irid., p. 162, not of Fl. Cap.; *Wurthia elegans*, Regel, Gartenfl. 1853, p. 98, tab. 46, f. 2).—THUNBERG's specimen is not *I. patens*, Gawl, as named by KLATT.
- γ =*Ixia* sp. Its leaves are nearly as long as the stem, a character that does not agree with THUNBERG's description of *I. aristata*.
- δ =*I. micrandra*, Baker, not *I. patens*, Ait. nor *I. leucantha*, Jacq. nor *I. candida*, Red., as named by KLATT.
2. *I. bicolor*, Thunb. Hoffm. Phyt. Blätt., p. 3 (1803).—Two sheets.—"Cap. Thunberg."
- α =*Geissorhiza bicolor*, (Thunb.) N. E. Br. comb. nov. Not *G. purpureo-lutea*, Baker, as named by BAKER, nor *G. Rocheana*, Sweet, as named by KLATT.

β =*Geissorhiza humilis* var. *grandiflora*, Baker. Not *Trichonema caulescens*, Gawl, as named by KLATT.

3. *I. bulbifera*, L.; Thunb. Diss. Ixia, p. 15 (1783).—Four sheets, β , γ , δ and ϵ .—"Cap. Thunberg."

β =*Sparaxis bulbifera*, (L.) Ker (also according to JUEL). The specimen on this sheet is named by KLATT: "*S. bulbifera*, Ait."

γ and δ =*Sparaxis fimbriata*, Ker. Not *S. grandiflora*, Ait., as named by KLATT.

ϵ =*Sparaxis atropurpurea*, Klatt. The dark purple colour of the perianth is still very distinct. Not *S. grandiflora*, Ait. var. *purpurea*, nor *S. stellaris*, Sweet, as written on the sheet by KLATT.

4. *I. bulbocodium*, L.; Thunb. Diss. Ixia, p. 6 (1783).—Seven sheets, but only two of them from S. Africa.

α =*Romulea similis*, Eckl. according to BAKER. Not *Trichonema cruciatum*, Gawl, as named by KLATT.—"Cap. Thunberg."

γ =*Romulea rosea*, Eckl. according to BAKER. It is the same plant as ZEYHER 1605! with brown margins to the inner bract. Not *Trichonema chloroleucum*, Ker, as named by KLATT.—"Cap. Thunberg."

ζ =*Romulea rosea*, Eckl. according to BAKER (doubtful!).—"I. rosea Hort. m. eo nomine ex Hort. Kewensi."

5. *I. capillaris*, L.f. Suppl., p. 92 ("Thunb.") (1781); Thunb. Diss. Ixia, p. 12, with a reduced fig. (1783).—Two sheets.—"Cap. Thunberg."

Both are *I. capillaris*, L.f. (1781).

6. *I. cinnamomea*, L.f. Suppl., p. 92 ("Thunb.") (1781); Thunb. Diss. Ixia, p. 10, tab. (2) (1783).—One sheet.—"Cap. Thunberg."

This is *Hesperantha cinnamomea*, (L.f.) Ker. Its leaves are characterized by crisped edges.

7. *I. coccinea*, Thunb. Fl. Cap., p. 207 (1811).—Two sheets.—"Cap. Thunberg."
 α =*I. speciosa*, Andr. and not *I. crateroides*, Gawl, as named by KLATT on the sheet.

β =*I. patens*, Ait. KLATT named this specimen *I. patens*, Gawl.

8. *I. corymbosa*, L.; Thunb. Diss. Ixia, p. 11 (1783).—Two sheets.—"Cap. Thunberg."

α ("alba")=*Lapeyrousia purpureolutea*, Baker. Not *Oviedia corymbosa*, Spreng., as named by KLATT.

β ("caerulea")=*Lapeyrousia azurea*, Eckl. JUEL collected both specimens under the name *Lapeyrousia corymbosa*, (L.) Ker.

9. *I. crispa*, L.f. Suppl., p. 91 ("Thunb.") (1781); Thunb. Diss. Ixia, p. 9, tab. (2) (1783).—Two sheets.—"Cap. Thunberg."

Both specimens, characterized by very narrow crisped leaves, belong to *Tritonia undulata*, (Burm.) Baker and match the type of *I. crispa*, L.f.

10. *I. crocata*, L.; Thunb. Diss. Ixia, p. 17 (1783).—Two sheets.—"Cap. Thunberg."

α =*Tritonia crocata*, (L.) Ker. (not Ait. as quoted by KLATT).

β =*Tritonia deusta*, Ker.

11. *I. crocea*, Thunb. Fl. Cap., p. 218 (1811).—One sheet.—"Cap. Thunberg."

This is *Romulea sublutea*, (Lam.) Baker [syn. *I. sublutea*, Lam. (1789)]. Not *Trichonema speciosum*, Ker, as named by KLATT.—The yellow colour of the flowers is well preserved.

12. *I. elliptica*, Thunb. Hoffm. Phyt. Blätt., p. 4 (1803).—one sheet.—“cult. in Horto Kewensi. Afzelius.”

This is *Lapeyrouisia juncea*, Pourr.=*Gladiolus junceus*, L.f. (1781). Not *Geissorhiza excisa*, Ker, as named by KLATT.

13. *I. erecta*, Berg.; Thunb. Diss. Ixia, p. 16 (1783).—Three sheets.—“Cap. Thunberg.”

All *I. erecta*, Thunb., but not *I. erecta*, Berg., which is a synonym of *I. polystachya*, L. which name is erroneously quoted by JUEL as the valid one. The specimen on sheet 2 has been named by KLATT *I. pentandra*, L.

14. *I. excisa*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 19, tab. (1) (1783).—Two sheets.—“Cap. Thunberg.”

α =*Geissorhiza excisa*, (L.f.) Ker (also according to JUEL) and is the same as the type of *I. excisa*, L.f. (1781).

β =*Geissorhiza* sp. It is not *G. recurvifolia*, Klatt, as named by KLATT.

15. *I. falcata*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 19, tab. (1) (1783).—Four sheets.—“Cap. Thunberg.”

α and β =*Hesperantha falcata*, (L.f.) Ker (also according to JUEL), and identical with the type of *I. falcata*, L.f.

γ contains two species. Three specimens on the sheet belong to *Hesperantha pilosa*, Ker.; the fourth specimen could not be determined, but it is not *H. graminifolia*, Sweet, as named by KLATT.

δ =a small-flowered form of (or a species allied to) the plant BAKER has called *Geissorhiza imbricata*, Ker. Not *Hesperantha falcata*, Ker, as named by KLATT and quoted by JUEL, nor *Geissorhiza Brehmii*, Eckl., as named by BAKER.

16. *I. fenestrata*, Thunb. in Hoffm. Phyt. Blätt., p. 4 (1803).—One sheet.—“Cap. Thunberg inter Söndags- et Visch-rivier.”

This is *Tritonia laxifolia*, Benth. Not *Montbretia laxifolia*, Klatt, as named by KLATT.

17. *I. hirta*, Thunb. Diss. Ixia, p. 9 (1783).—One sheet.—“Cap. Thunberg.”

This is *Geissorhiza hirta*, (Thunb.) Ker. Not *G. quinquangularis*, Eckl., as named by KLATT.

18. *I. humilis*, Thunb. Diss. Ixia, p. 8 (1783).—Four sheets.—“Cap. Thunberg.”

α =*Geissorhiza humilis*, (Thunb.) Ker. Not *G. Brehmii*, Eckl., as named by KLATT.

β and γ =*Ixia* sp. (indeterminable), but they are specimens of a species nearest *G. humilis* var. *grandiflora*, Baker, though the bracts and flowers seem different. It is not identical with *G. Brehmii*, Eckl., as named by KLATT.

δ =*Geissorhiza graminifolia* var. *bicolor*, Baker, and is the same as MACOWAN, Herb. Norim., p. 261. Not *G. quinquangularis*, Eckl., as named by KLATT on the sheet.

19. *I. lancea*, Thunb. Diss., Ixia, p. 18 (1783); non Jacq.!—One sheet, containing five good specimens.—“Cap. Thunberg.”

This plant being different from *I. lancea*, Jacq., N. E. BROWN proposed to retain the much older generic name by calling the plant *Tritonia lancea*, (Thunb.) N. E. Br. comb. nov. [syn. *I. lancea*, Thunb. (1783), not *I. lancea*, Jacq. (1796)]. It is not *T. crispa*, as named by KLATT on the sheet.

20. *I. linearis*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 12 (1783).—One sheet.—“Cap. Thunberg.”

This plant is a *Gladiolus* and not an *Ixia*; it is identical with *G. biflorus*,

Klatt in Trans. S. Afr. Phil. Soc. III, p. 197 (1885). But as the Linnean name has priority, N. E. BROWN retained it for this species by calling the plant *Gladiolus linearis*, (L.f.) N. E. Br. comb. nov. It is not *Gladiolus debilis*, Sims, as named by KLATT on the sheet.

21. *I. maculata*, L.; Thunb. Diss. Ixia, p. 16 (1783).—Nine sheets.—“Cap. Thunberg.”

α = *Tritonia stricta*, Klatt and is identical with ZEYHER 4008. It is not *I. retusa*, as named by KLATT.

β = *Ixia* sp. (indeterminable). It is different from *Gladiolus debilis*, Sims, as named by KLATT.

γ = named *I. conica*, Salisb. by KLATT, but the correctness of this identification is found doubtful by N. E. BROWN, who failed to identify this specimen.

δ = *I. columellaris*, Ker. Not *I. maculata*, Jacq., as named by KLATT.

ϵ = *I. monadelpha*, De la Roche, not *I. capillaris*, Bot. Mag., as named by KLATT.

The other four sheets, δ , ϵ , η , and θ appear to contain variations of *I. maculata*, L. (respectively named by KLATT on the sheet: *I. curta*, Andrews; *I. columellaris*, Gawl.; *I. curta*, Andrews and *I. conica*, Salisb.). JUEL in his “*Plantae Thunbergianae*” collected all specimens under the name *I. maculata*, L.

22. *I. minuta*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 6, tab. (1) (1783).—One sheet.—“Cap. Thunberg.”

This is *Pauridia minuta*, (L.f.) Dur. et Schinz, syn. *P. hypoxidoides*, Harv., as named by JUEL in “*Plant. Thunberg.*” and also by BAKER on the sheet. The former name being much older, it must take precedence.

It is a very dwarf species belonging to the Amaryllidaceae.

23. *I. monanthos*, Thunb. Fl. Cap., p. 226 (1811); non Delar.!—One sheet.—“Cap. Thunberg.”

This specimen belongs to *Geissorhiza Bellendeni*, MacOwan. It is not *G. Rocheana*, Sweet, as named by KLATT, nor *G. Rochensis*, Ker var. *monanthos*, (Thunb.), as quoted by JUEL.

24. *I. pendula*, L.f. Suppl., p. 91 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 15 (1783).—One sheet.—“Cap. Thunberg.”

This is *Dierama pendulum*, (L.f.) Baker. From N. E. BROWN’s paper it may be quoted that under this name BAKER has confused two or three other species. But the type is a native of Uitenhage and Humansdorp Divisions, ZEYHER 918! It is not *D. ensifolium*, Koch et Bouché, as named by KLATT.

Its drooping flowers on long stalks give this plant a most graceful appearance.

25. *I. pentandra*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 18 (1783).—Two sheets.—“Cap. Thunberg.”

Both are identical with *Tritonia scillaris*, (L.) Baker, and the same as *I. pentandra*, L.f., the specimen on sheet β being a remarkable pentandrous form.

26. *I. pilosa*, L.f. Suppl., p. 92 (“Thunb.”) (1781); Thunb. Diss. Ixia, p. 8 (1783).—One sheet, containing three distinct species.—“Cap. Thunberg.”

One is *Hesperantha pilosa*, (L.f.) Ker, another may be *Hesperantha falcata*, Ker., while the third seems to be a species of *Geissorhiza* near *G.*

- pauciflora, Baker, but with a different corm. JUEL and KLATT have collected all three specimens under the name *H. pilosa*.
27. *I. polystachya*, L.; Thunb. Fl. Cap., p. 240 (1811).—Two sheets.—“Cap. Thunberg.”
 α = *I. polystachya*, L., not *I. dubia*, Vent., as named by KLATT on the sheet.
 β = *Ixia* sp. (indeterminable); it is not *I. conica*, Salisb., as named by KLATT. The flowers appear to have been rosy or purplish.
28. *I. radians*, Thunb. Hoffm. Phyt. Blätt., p. 3 (1803).—Two sheets.—“Cap. Thunberg.”
 Both belong to *Geissorhiza Rochensis*, Ker. The specimen on sheet β has been named by KLATT: *Trichonema roseum*, Gawl.
29. *I. reflexa*, Thunb. Fl. Cap., p. 220 (1811).—Five sheets.—“Cap. Thunberg.”
 α , β , γ and δ = *Romulea bulbocodioides*, (Delar.) Baker. Not *Trichonema caulescens*, Gawl, as named by KLATT on the sheets.
 ϵ = *Romulea bulbocodioides* var. *elongata*, Baker (*I. reflexa elongata* of THUNBERG, type specimen !), and not *Trichonema caulescens*, Gawl, as named by KLATT.
30. *I. reticulata*, Thunb. Fl. Cap. ed. Schultes, p. 60 (1823).—One sheet.—“Cap. Thunberg.”
 This is *Tritonia lineata*, (Salisb.) Ker. Not *T. rosea*, Klatt, as named by KLATT, nor *Montbretia lineata*, Baker, as written on the sheet by BAKER.
31. *I. scariosa*, Thunb. Fl. Cap., p. 243 (1811).—One sheet.—“Cap. Koude Bockefeld, octobri. Thunberg.”
 This is *I. scariosa*, Thunb. and may be possibly the same as *I. incarnata*, Jacq. Icon. Rar. t. 282 (1796). Not *I. capillaris*, Bot. Mag., as named by KLATT.
32. *I. scillaris*, Thunb. Diss. *Ixia*, p. 13 (1783).—Two sheets.—“Cap. Thunberg.”
 α = *Geissorhiza setifolia*, Eckl., not of Baker. It is not *G. setacea*, Ker, as named by KLATT.
 β = *Geissorhiza* sp.; neither *G. setacea*, Ker, as named by KLATT, nor *G. humilis* var. *bicolor*, Baker, to which BAKER has referred it in the *Flora Capensis*, Vol. VI, p. 67. JUEL in his “*Plantae Thunbergianae*” ascribed both specimens to *Geissorhiza secunda*, (Delar.) Ker.
33. *I. secunda*, Delar.; Thunb. Diss. *Ixia*, p. 9 (1783).—Two sheets.—“Cap. Thunberg.”
 α = *Geissorhiza secunda*, (Delar.) Ker.
 β = *G. secunda* var. *ramosa*, Klatt.
34. *I. setacea*, Thunb. Diss. *Ixia*, p. 13 (1783).—One sheet.—“Cap. Thunberg.”
 This is *Geissorhiza setacea*, (Thunb.) Baker. Not *G. recurvifolia*, Klatt, as named by KLATT.
35. *I. squalida*, Thunb. Hoffm. Phyt. Blätt., p. 4 (1803).—One sheet.—“Cap. Thunberg.”
 This is *Tritonia securigera*, Ker [syn. *Gladiolus securiger*, Ait. (1789)]. Not *Montbretia securigera*, DC., as named by KLATT on the sheet.
36. *I. viridis*, Thunb. Fl. Cap., p. 242 (1811).—Two sheets.—“Cap. Thunberg.”
 This is *I. viridiflora*, Lam. (1789), the beautiful green *Ixia*. The specimens on both sheets are well recognizable, and particularly the flowers on sheet β have kept their remarkable green shade. A photograph of sheet β is

reproduced herewith (*vide* Plate VI.); the sheet is labelled on the back "e Capite bonae Spei C. P. Thunberg."

Morea, Mill.

This genus as represented in the THUNBERG Herbarium includes but 8 *Moreas*, the remainder of the specimens belonging to the genera *Aristea* (8 species), *Bobartia* (4), *Homeria* (3), *Hexaglottis* (2), *Diets* (1), *Cleanthe* (1), *Lapeyrousia* (1), *Sisyrinchium* (1), *Ferraria* (1) and *Belemcanda* (1). Two of them are no natives from S. Africa, viz. *Sisyrinchium angustifolium*, Mill. (*Moraea Bermudiana*, (L.) Thunb. δ) and *Belemcanda chinensis*, Lem. (*Moraea chinensis*, (L.) Thunb.).

From N. E. BROWN's publication it is learned that the correct spelling of the name of this genus is *Morea* instead of *Moraea*. MILLER, in his "Figures of Plants," Vol. II, p. 159, tab. 238, published in the part of the work that was issued June 27th, 1758 (the date for the whole volume being given on the title page as 1760), describes and figures a plant upon which he founds and properly characterizes the genus *Morea* "in honour of Robert More Esquire of Shropshire." LINNAEUS has accepted MILLER's genus in the 2nd edition of his "Species Plantarum," p. 59, published in 1762, but altered the spelling of the generic name to *Moraea*, an error that has persisted ever since. BROWN writes that it is probable that the similarity of the name *Morea* to the maiden name MORAEUS of LINNAEUS' wife led to his misspelling it. However, as the genus *Morea* was published after 1753, properly characterized and figured, and as LINNAEUS accepted it as MILLER's genus (see LINNAEUS, *Genera Plantarum*, ed. 6, p. 27 (1767), where he copies the characters of the genus as given by MILLER), MILLER's original spelling has the priority.

Under the generic name *Iris* THUNBERG has collected in his herbarium numerous species, many of them being S. African and for the greater part belonging to the genus *Morea*, the remainder consisting of a few species of *Diets*, *Homeria* and *Helixyra*.

LILIACEAE.

Albuca, L.

Under the generic name *Albuca* we found 6 species collected in the THUNBERG Herbarium, one of them belonging to another genus.

1. *A. fastigiata*, Dryand.; Thunb. Vet. Acad. Nya Handl., p. 58 (1786).—Three sheets.—"Cap. Thunberg."

The specimen on sheet γ is somewhat different and labelled by THUNBERG: *A. fast. γ . thyrsiflora?*

2. *A. major*, L.; Thunb. Vet. Acad. N. Handl., p. 57 (1786).—Two sheets.

Sheet α is marked on the back: "cult. in H. Upsal." (grown in the Uppsala Botanic Garden).

The specimen on sheet β originates from the Cape (THUNBERG).

3. *A. minor*, L.; Thunb. Vet. Acad. N. Handl., p. 58 (1786).—One sheet.—"Cap. Thunberg e Roggeveld."

4. *A. spiralis*, L.f. Suppl., p. 196 ("Thunb.") (1781); Thunb. Vet. Acad. N. Handl., p. 59, tab. II, fig. 1 (1786).—Two sheets.—"Cap. Thunberg."

Sheet α contains a spirally wound flower-stem.

5. *A. viscosa*, L.f. Suppl., p. 196 ("Thunb.") (1781); Thunb. Vet. Acad. N. Handl., p. 58 (1786).—One sheet.—"Cap. Thunberg."

Flowering specimen with bulb. This species is characterized by its very narrow, grasslike leaves.

6. *A. altissima* (?). This is not an *Albuca*, but very likely *Urginea altissima*, (L.f.) Baker (syn. *Ornithogalum altissimum*, L.f.).—One sheet.

The specimen by which this species is represented shows a stout plant with much broader leaves than of the foregoing species.

Aloe, L.

The Aloes in the THUNBERG Herbarium have been revised by the late Dr. N. E. BROWN, A.L.S. and described in "Bothalia," Vol. I, Part III: *The Genera Aloe and Mesembryanthemum as represented in Thunberg's Herbarium* (1923).

As a matter of fact in most genera we have examined in this herbarium the material was quite satisfactory, in many cases really excellent. However, this remark does not apply to the genus *Aloe*, for we found the specimens of most of the species consist of detached leaves and flower-stems, and in some instances the leaves and inflorescences of what are supposed to belong to one species, represent two distinct species and even different genera. Dr. BROWN writes that such a mixture is so unlike the usual excellence of THUNBERG's specimens, that it must be attributed to the succulent nature and often large size of the plants and the difficulty THUNBERG must have had in properly making good, dried specimens of them while travelling as he did at the date.

Evidently his specimens of detached leaves and flowers must have become mixed in the press and THUNBERG must have sometimes forgotten which leaves belonged to the flowers. Moreover it is quite possible that some of the mixtures may have been made when, after his return to Sweden, he remounted the specimens, —originally mounted upon small sheets of thin paper—on larger sheets of thicker paper.

N. E. BROWN has checked the names as given by THUNBERG and in the following enumeration of the Aloes in the THUNBERG Herbarium, the plants have been named accordingly.

1. *A. arachnoides*, (Mill.) Thunb. Diss. Aloë, p. 7 (1785).—One sheet.

THUNBERG's specimen consists of three tufts of leaves and three racemes of flowers. The latter are detached, but have been inserted among the leaves; two of them certainly belong to a different species, only that of the middle specimen might belong to the same species.

The leaves belong to *Haworthia arachnoides*, Duval 1809 (syn. *H. arachnoides*, Haw. 1812; *A. arachnoidea*, Mill. 1768, and *A. arachnoides*, (Mill.) Thunb. 1785).

2. *A. dichotoma*, L.f. Suppl., p. 206 ("Thunb."); Thunb. Diss. Aloë, p. 4 (1785).—One sheet.—"Cap. Thunberg."

The sheet contains two short, longitudinal sections of the stem, one showing the very smooth bark and the other the interior fibre, and one leaf.

This is *A. dichotoma*, Masson in Phil. Trans. Roy. Soc., London (1776), Vol. LXVI, Part I, p. 310. MASSON's description of the so-called "Kokerboom" being 5 years older than that of LINNAEUS the younger (1781), MASSON ought to be quoted as the authority of this species instead of L.f. The description MASSON gives of this strange looking Aloe as quoted by N. E.

BROWN in his paper, is very distinct and a far better one than that we owe to the younger LINNAEUS.

3. *A. disticha*, Thunb. Diss. Aloë, p. 7 (1785); non L. !—Two sheets, numbered 1 and 2.

Both contain very good specimens of a new species of *Gasteria*, for which N. E. BROWN proposed the name *G. Thunbergii*, N. E. Br. It is not *Gasteria verrucosa*, (Mill.) Haw., as named by JUEL.

4. *A. humilis*, Mill.; Thunb. Diss. Aloë, p. 6 (1785).—One sheet.—“cult. in H. Upsal. Thunberg.”

One small tuft of leaves and two good flowering stems. We find stated on the back of the sheet that this material originates from a plant cultivated in the Uppsala Botanic Garden.

5. *A. lingua*, Thunb. Diss. Aloë, p. 8 (1785).—One sheet.—We found the specific name written by THUNBERG as *lingva*.

The specimen consists of two leaves and two flowering stems.

This is *A. plicatilis*, Mill. 1768 (syn. *A. linguaeformis*, L.f. 1781, not of MILLER). It is not *Gasteria disticha*, (L.) Haw., as quoted by JUEL in his “*Plantae Thunbergianae*.”

6. *A. maculata*, Thunb. Diss. Aloë, p. 8 (1785).—Two sheets, numbered α and β .

Sheet α contains portions of two leaves and a raceme of what N. E. BROWN believes to be *Gasteria pulchra*, Haw.

Sheet β (which also has the name “*obliqua* Haw.”, written upon it in pencil) contains the leaf of some large and broad-leaved species of *Gasteria*, totally different from *G. pulchra*, which could not be identified, and two flower-spikes of some species of *Aloe*, also indeterminable.

JUEL has collected all specimens under the name *Gasteria maculata* (Thunb.) Haw.

7. *A. perfoliata*, L.; Thunb. Diss. Aloë, p. 5 (1785).—Three sheets, marked α , β and γ .

Sheet α contains one leaf about 7 inches long and $2\frac{3}{4}$ inches broad, a tuft of four small leaves about $2\frac{1}{2}$ inches long and 1 inch broad, and two single flowers. These fragments are likely to belong to three different species, none of them could be named with certainty.

Sheet β contains part of a leaf and two inflorescences which are believed to belong to *A. latifolia*, Haw.

Sheet γ contains part of a leaf and a flower-spike of *A. vera*, L. and is labelled on the back: “*ex India occidentali*, Forsström” (sent from the West Indies by FORSSTRÖM, where *A. vera* has been introduced from the Canaries).

8. *A. pumila*, Thunb. Diss. Aloë, p. 7 (1785).—Two sheets.

Sheet α contains a tuft of leaves of *Haworthia fasciata*, Haw. on the left-hand side, and on the right-hand side a tuft of leaves of *Haworthia granata*, Haw. Each of them has a flower-stem placed among them, but detached, which may or may not belong to the leaves.

Sheet β containing two leaves and a paniculately branched flowering stem (a very stout inflorescence with 6 branches!), may be *Haworthia margaritifera*, Haw., but the material is too poor to make the identification certain.

The specimens on sheet *a* are from plants cultivated in the Uppsala Botanic Garden.

9. *A. retusa*, L.; Thunb. Diss. Aloë, p. 10 (1785).—One sheet.—“Cult. in H. Upsal. Thunberg.”

The specimen of this consists of a fragment of a plant with two leaves and a flower-stem attached, five detached leaves, and a detached inflorescence, all belonging to *Haworthia retusa*, (L.) Duval (not Haw., as quoted by JUEL). The specimen is labelled on the back of the sheet as being from a plant cultivated in the Uppsala Botanic Garden.

10. *A. spicata*, Lf. Suppl., p. 205 (“Thunb.”) (1781).—Thunb. Diss. Aloë, p. 4 (1785).—One sheet.

THUNBERG's specimen, consisting of portions of two leaves and six detached flowers, is the type of this species.

11. *A. spiralis*, L.; Thunb. Diss. Aloë, p. 9 (1785).—One sheet.—“cult. in H. upsal.”

A small tuft of leaves which probably belongs to *Apicra spiralis*, Baker (1880) and a detached inflorescence of some species of *Gasteria*, which is quite indeterminate.

12. *A. succotrina* = *A. sinuata*, Thunb. Diss. Aloë, p. 6 (1785).—One sheet.

Bearing the name *A. succotrina* in THUNBERG's handwriting we found a sheet containing a specimen listed by JUEL in his “*Plantae Thunbergianae*” under the name *A. sinuata*, Thunb. According to N. E. BROWN this sheet contains part of a leaf of *A. fruticosa*, Lam., part of a leaf of *A. spicata*, Lf., and part of a raceme of flowers of some species of *Aloe* which is quite indeterminate. The specimen does not belong to *A. succotrina*, Lam., as given as the valid name by JUEL.

If *A. sinuata*, Thunb. is considered to be founded by THUNBERG upon the plant enumerated by LINNAEUS in his “*Species Plantarum*” (ed. 1, p. 320, and ed. 2, p. 458) as *A. perfoliata*, var. ξ , which is based upon “*Aloe succotrina angustifolia spinosa, flore purpurea*” of COMMELIN, “*Horti Medici Rariorum Plantarum*”, Vol. I, p. 94, tab. 48 (1697), it must be placed as a synonym of *A. succotrina*, Weston (1770), but if it is held to be founded upon the sheet bearing the name *A. succotrina* in the THUNBERG Herbarium, then the name *A. sinuata* must disappear altogether.

13. *A. variegata*, L.; Thunb. Diss. Aloë, p. 9 (1785).—One sheet.

THUNBERG's specimen consists of two leaves with the variegation upon them quite distinct, and a single flower.

14. *A. viscosa*, L.; Thunb. Diss. Aloë, p. 9 (1785).—One sheet.

The sheet of this species in THUNBERG's Herbarium contains three flowering specimens, marked by N. E. BROWN: A, B and B.

A (the central specimen) which is larger than the others, belongs to *Haworthia viscosa*, (L.) Haw.—B (the lateral specimens) may belong to a variety of *H. viscosa*, (L.) Haw. or possibly represent a different species allied to it.

Eriospermum, Jacq.

This remarkable genus we found represented in the THUNBERG Herbarium by one species only, viz.:

1. *E. latifolium*, Jacq.; Thunb. Fl. Cap. ed. Schultes, p. 317 (1823). Syn.: *E.*

capense, (L.) Thunb. Fl. Cap., p. 294 (1820); *Ornithogalum capense*, L.; Thunb. Prodr., p. 62 (1794).—One sheet.—“Cap. Thunberg.”

Sansevieria, Thunb.

The above genus we found represented in the THUNBERG Herbarium by two species, viz.:

1. *S. aethiopica*, Thunb. Prodr., p. 65 (1794).—Two sheets.—“Cap. Thunberg.”

The specimens on both sheets belong to *S. zeylanica*, (Jacq.) Willd.

On sheet 1 the specimen has been originally named by THUNBERG “*Aletris aethiopica*,” but later on the generic name has been crossed out and replaced by the name *Sansevieria*, which was written above it.

The specimen on sheet 2 is named by THUNBERG “*Sanseverina aethiopica*.”

2. *S. thyrsiflora*, Thunb. Prodr., p. 65 (1794).—One sheet.

THUNBERG has written on the sheet: “*Sanseverinia thyrsiflora*. *Aletris hyacinthoides*? *gvineensis*?”, while it is labelled on the back “Cult. in Italia.”

Veltheimia, Gled.

This small S. African genus as represented in the THUNBERG Herbarium includes two species of *Veltheimia* and one *Kniphofia*.

1. *V. capensis*, (L.) Thunb. Fl. Cap., p. 278 (1820), idem ed. Schultes, p. 309 (1823). Syn. *Aletris capensis*, L.; Thunb. Prodr., p. 60 (1794).—One sheet.—“cult. in H. Upsal. Thunberg.”

This is the same as *V. viridifolia*, Jacq., which name has the priority as being much older than the Thunbergian name (*V. viridifolia*, described and pictured by JACQUIN in his “*Plantarum rariorum Horti Caesarei Schoenbrunnensis*, 1797).

JUEL has quoted this species under the name *V. viridiflora*, Jacq. which must be considered as being incorrect. The specimen originates from the Uppsala Botanic Garden.

2. *V. glauca*, Jacq.—One sheet.—“Cap. Thunberg.” A species with glaucous leaves.
3. *V. uvaria*, (L.) Willd.; Thunb. Fl. Cap., p. 279 (1820). Syn. *Aletris uvaria*, (L.) Murr.; Thunb. Prodr., p. 60 (1794).—One sheet.—“Cap. Thunberg.”

Kniphofia aloides, Moench.?

We may conclude this enumeration of S. African Liliaceae in the THUNBERG Herbarium with the only “tulip” THUNBERG has added to his collection, viz. *Tulipa Breyniana*, L.; Thunb. Prodr., p. 65 (1794). The specific name as written by THUNBERG on the sheet is spelled “*breijniana*”; the sheet is labelled on the back “Cap. Thunberg.”

This is no tulip at all, but has commonly been regarded as a plant belonging to the S. African genus *Bacometra*. The name quoted by JUEL in his book is *B. columellaris*, Salisb. Miss G. J. LEWIS (Journal of S. African Botany VII, p. 57, 1941) has, however, shown that the plant in question is a *Homeria*, viz. *H. collina* Vent., which therefore becomes *H. Breyniana* (L.) Lewis nov. comb.

CYCADACEAE.

1. *Zamia caffra*, Thunb. Haarl. Maatsch., p. 424 (1782). Syn.: *Cycas caffra*, Thunb. N. A. Upsal., p. 236, tab. V (1775).—Four sheets.—“Cap. Thunberg.”

Sheet 1 contains part of a ♂ inflorescence.

Sheet 2 contains portions of a ♀ inflorescence and fruit.

Sheet 3 contains two leaves and on sheet 4 we find a leaf characterized by coarser pinnae.

All specimens belong to *Encephalartos caffer*, (Thunb.) Miq., a species of "Kaffirbread."

2. *Zamia pumila* (?).—One sheet, containing some leaves. A species of *Encephalartos* ?

TAXACEAE.

The genus *Taxus* as represented in THUNBERG's Herbarium includes 4 species of the genus *Podocarpus*, L'Hérit., the S. African "Yellow-woods" or "Geelhout". We may confine ourselves to mention here the "True Yellow-wood," *Podocarpus latifolia*, (Thunb.) R. Br., introduced by THUNBERG under the name *Taxus latifolia*, Thunb. and first described by him in his Prodr., p. 117 (1800).—One sheet, labelled on the back: "e Cap. sylvis Houtniqvas, Grootvadersbosch, aliis. Thunberg. Incolis: Geelhout."

MISCELLANEOUS NOTES.

LILIACEAE. The *Anthericum*s in the THUNBERG Herbarium number rather more than 30 species, nearly all being natives of the Cape. This genus appears to have been revised by C. E. Moss and has been found to include species of *Bulbine* (many !), *Urginea*, *Chlorophytum*, *Trachyandra* and of the non-S. African genus *Dianella*.

ORCHIDACEAE. The S. African orchids are well represented in the THUNBERG Herbarium and have been revised by the late Dr. N. E. BROWN.

When examining the Orchidaceae we came across numerous species of *Disa*, which have been found to include a number of species belonging to the genera *Herschelia*, *Monadenia*, *Satyrium*, *Schizodium* and even a European species, *Orchis Morio*, L. (the left-hand specimen of three plants of *Disa sagittalis*, as named by THUNBERG and determined by N. E. BROWN).

There is a good specimen of the beautiful *Disa uniflora*, Berg. of Table Mountain, one of S. Africa's botanical gems, named by THUNBERG on the sheet D. grandiflora. The genus *Disa* was founded by P. J. BERGIUS upon this species in his "Descriptiones Plantarum ex Capite Bonae Spei" (1767). The description he gives of this plant which he named *D. uniflora*, is very good and the earliest publication of it. From a plate at the back of the volume the plant is quite recognizable. *D. grandiflora*, having been published much later by the younger LINNAEUS in "Supplementum Plantarum" (1781), must be placed as a synonym.

The herbarium also contains many species of the genera *Satyrium* and *Pterygodium*.

We may reproduce herewith a photograph (Plate VII.) of THUNBERG's specimen of *Satyrium carneum*, R. Br., the "Rooi trewa," which we found near Seekoe Vlei in the Cape Flats; a stately orchid with its long, conspicuous spike of rosy flowers.

This specimen is named by THUNBERG on the sheet "Satyrium cucullatum. ♂.", but in N. E. BROWN's handwriting it is labelled as being "*Satyrium carneum*, Br. fide N. E. Brown." On the back of the sheet THUNBERG has written "e Cap b. spei Thunberg."

There are four sheets of *S. cucullatum*, Sw., marked α , β , γ and δ . On sheet α N. E. BROWN has written: "Probably *S. membranaceum*, Sw., certainly not *S. cucullatum*." The specimen on sheet β is the type of *S. cucullatum*, Sw., according to N. E. BROWN, and *S. cucullatum* γ has been identified by N. E. BROWN as *S. membranaceum*, Sw. A fifth sheet, marked ϵ , contains a specimen named by THUNBERG *S. bicornis*. The latter name is quoted by THUNBERG as a synonym on the sheets α and β . JUEL in his "Plantae Thunbergianae" collected all specimens under the name *S. bicornis*, (L.) Thunb. Prodr., p. 6 (1794).

AIZOACEAE. The genus *Mesembryanthemum*, L. is well represented in the THUNBERG Herbarium and appears to have been revised by the late Dr. N. E. BROWN [*vide* "Bothalia", Vol. I, Part III (1923)]. The only "mimicries" among the numerous species collected by THUNBERG are *M. testiculare*, Thunb. Nov. Act. phys.-med. Caesar. Leop.-Carol. naturae curios., Vol. VIII (1791) = *M. testiculare*, Ait. = *Argyroderma testiculare*, (Ait.) N. E. Br., and *M. truncatum*, Thunb. Nov. Act. phys.-med. Caesar. Leop.-Carol. naturae curios., Vol. VIII (1791) = *Conophytum truncatum*, (Thunb.) N. E. Br.

The peculiar *M. moniliforme*, Thunb. we found represented by two good specimens of the plant in a resting state, viz. without leaves or flowers. This species was first described by THUNBERG in Nov. Act. phys.-med. Caesar. Leop.-Carol. naturae curios., Vol. VIII (1791).

If THUNBERG would be able to come back to our sphere, he would hardly believe his eyes, when seeing the countless species of *Lithops*, *Conophytum*, *Pleiospilos*, *Argyroderma*, *Rimaria*, *Gibbaeum* and other remarkable Mesembryaceae, which have become known since the old days of his S. African botanical peregrinations. Yet the S. African "veld" has not been fully explored even yet and nobody knows what strange and interesting species are still to be discovered.

HYDNORACEAE. A curious plant in the THUNBERG Herbarium is *Hydnora africana*, Thunb., first described and figured by him in Kongl. Vet. Acad. Handl. (1775). There are two sheets of it, the second sheet is labelled on the back: "ex Africae australioris desertis. Thunberg" (from the southern deserts of Africa). The specimen of this parasitic plant, rather shapeless in dried condition, really looks like a fungus!

RANUNCULACEAE. The graceful *Anemone* which grows on the slopes of Table Mountain, *Anemone capensis*, (L.) Lam., we found in the THUNBERG Herbarium under the name *Atragene capensis*, L. [described by THUNB. in his Prodr. p. 94 (1800)]. There are two sheets of it, numbered 1 and 2.—"Cap. Thunberg."

SAPINDACEAE. The THUNBERG Herbarium also includes some material of *Aitonia capensis*, Thunb. Phys. Salsk. Handl., p. 166, with fig. (1781); *Aytonia capensis*, L.f. Suppl., p. 303 ("Thunb.") (1781).—"Cap. Thunberg." This shrub which is very conspicuous when adorned with its red, inflated capsules (we saw some specimens of it along the road on an excursion from Oudtshoorn to the Cango caves) has been later named *Nymania capensis*, (Thunb.) Lindb. and classified with the Meliaceae.

COMPOSITAE. Nearly all of THUNBERG's *Gnaphaliums* are Cape species. They are very numerous and for the greater part they consist of species of *Helichrysum*. Further they include *i.a.* a number of species which were found to belong to the genera *Helipterum*, *Anareton*, *Leontonyx* and *Metalasia*. The "Edelweiss" of the

European Alps, best known under the name *Gnaphalium Leontopodium* (= *Leontopodium alpinum*, Cass.) is not represented in THUNBERG's collection.

CUCURBITACEAE. Nearly all of THUNBERG's "Bryonias"—a few have been brought from Japan, Java and Ceylon—are S. African plants, belonging to the genera *Melothria* (most of them!), *Kedrostis*, *Coccinia* (1 species). One species, *Bryonia acutangula*, Thunb. Prodr., p. 13 (1794), found by THUNBERG near "Zekorivier" as labelled on the back of the sheet, is no Cucurbitacea at all, but has been identified as a *Senecio* sp. (Comp.)

ERICACEAE. The Cape heaths in the THUNBERG Herbarium are very numerous and undoubtedly provide most valuable material for investigation. They have been revised by RACH, as appears from the notes on the sheets. From THUNBERG's specimens we selected for reproduction *Erica cerinthoides*, L. (vide Plate VII.). This species, a large-flowered one, has been described by THUNBERG in his Diss. Erica, p. 25 (1785). There are three sheets of it, numbered α , β , and γ . Only the specimen on sheet α , of which accompanying photograph has been made, belongs to *E. cerinthoides*, the sheets β and γ respectively contain specimens of *E. erubescens*, Andr. and *E. elongata*, Lodd. (RACH!). Sheet α is labelled on the back "e Cap b. spei Thunberg."

E. cerinthoides is a very showy plant with its large, red, urnshaped flowers which are covered with red hairs on the outer side of the corolla, to which feature the plant derived the pretty common names "Red hairy heath" and "Rooi-haartjie." As to its habitat we found this species on the mountain-slopes near Simonstown (Cape).

SCROPHULARIACEAE. The genus "Antirrhinum" as represented in the THUNBERG Herbarium contains but S. African species, all belonging to the genus *Nemesia*, with exception of *A. longicorne*, Thunb. Prodr., p. 105 (1800), which is identical with *Diascia Thunbergiana*, Spreng.; and *A. aphyllum*, L.f. Suppl., p. 280 ("Thunb.") (1781), a very distinct species, which has been identified as a kind of "Bladderwort", *Utricularia Ecklonii*, Spreng. (Lentibulariaceae).



GÖRAN WAHLENBERG (1780-1851).

Medicinae Doctor and Thunberg's successor as a Professor of Botany at Uppsala University.

After a photograph by A. Dahlgren of an oil-painting in the house of the students of "Värmlands Nation" at Uppsala. Reproduced from: *Acta Horti Bergiani*, Bd. III, No. 3 (1905), Tab. 45.



The Institute of Systematic Botany at Uppsala (the former Botanical Institute)
Photo Almquist & Cöster, Hålsingborg.

Att Dene växt-Cataloge är enligt nedskedd in-
ventering och de anteckningar öfver stammi; Protocollet vidare inne-
håller uttrycket

Uppsala ut supra?

E. P. Thunberg.
innehåll öfverst. man.

E. P. Thunberg.
Lärare i Musik.

H. F. W. Wahlenberg
Kgl. Acad. d. v. Rector

Ad. Afzelius
tillhållad öfverst. man.

W. Wahlenberg.
Botan. Demonstrator.

Gabriel. Martin.

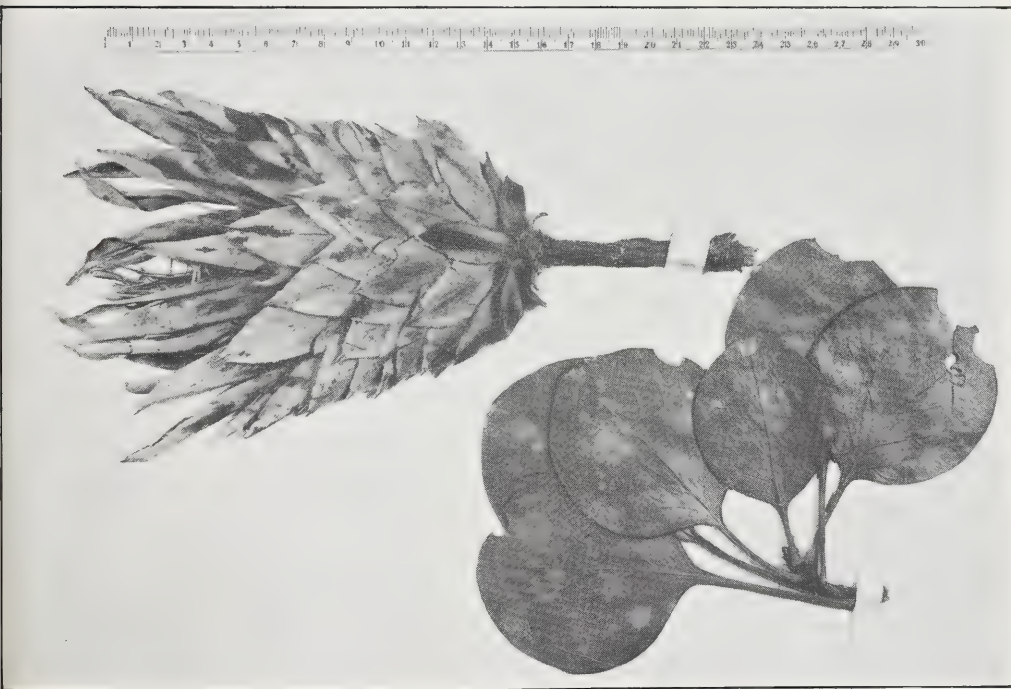
Official statement at the back of each volume of WAHLENBERG's catalogue of the
Herbarium Thunbergianum.

PLATE V.

Herbarium Thunbergianum.
Protea cynaroides, L. Photo Carl G. Alm.

PLATE VI.

Herbarium Thunbergianum.
Isia viridiflora, Lam. (l. viridis β). Photo Carl G. Alm.



Herbarium Thunbergianum.
Erica cernuoides, L. Photo Carl G. Alm.

PLATE VII.

Herbarium Thunbergianum.
Satyrion carneum, R. Br. (*S. cucullatum* δ). Photo Carl G. Alm.

